



Draft Environmental Impact Statement (DEIS)

for Centers for Disease Control and Prevention
Roybal Campus 2025 Master Plan

JANUARY 2014

PREPARED FOR

The Centers for Disease Control and Prevention (CDC)
U.S. Department of Health and Human Services
Atlanta, Georgia

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Executive Summary

ES.1 Introduction

The Centers for Disease Control and Prevention (CDC), an Operating Division (OPDIV) of the Department of Health and Human Services (HHS) has prepared this Draft Environmental Impact Statement (DEIS) to assess the potential impacts associated with the implementation of the Roybal Campus 2025 Master Plan (Master Plan) for HHS/CDC's Edward R. Roybal Campus (Roybal Campus) (Refer to Figure ES-1: Project Location and Study Area). The Master Plan was prepared to guide the future physical development of the Roybal Campus for the planning horizon of 2015 to 2025 in order to support HHS/CDC's mission and program requirements. The HHS/CDC has prepared this EIS in accordance with the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321 et seq.), the Council on Environmental Quality (CEQ) implementing regulations (40 CFR § 1500-1508) and the HHS General Administration Manual (GAM) Part 30 Environmental Procedures, dated February 25, 2000.

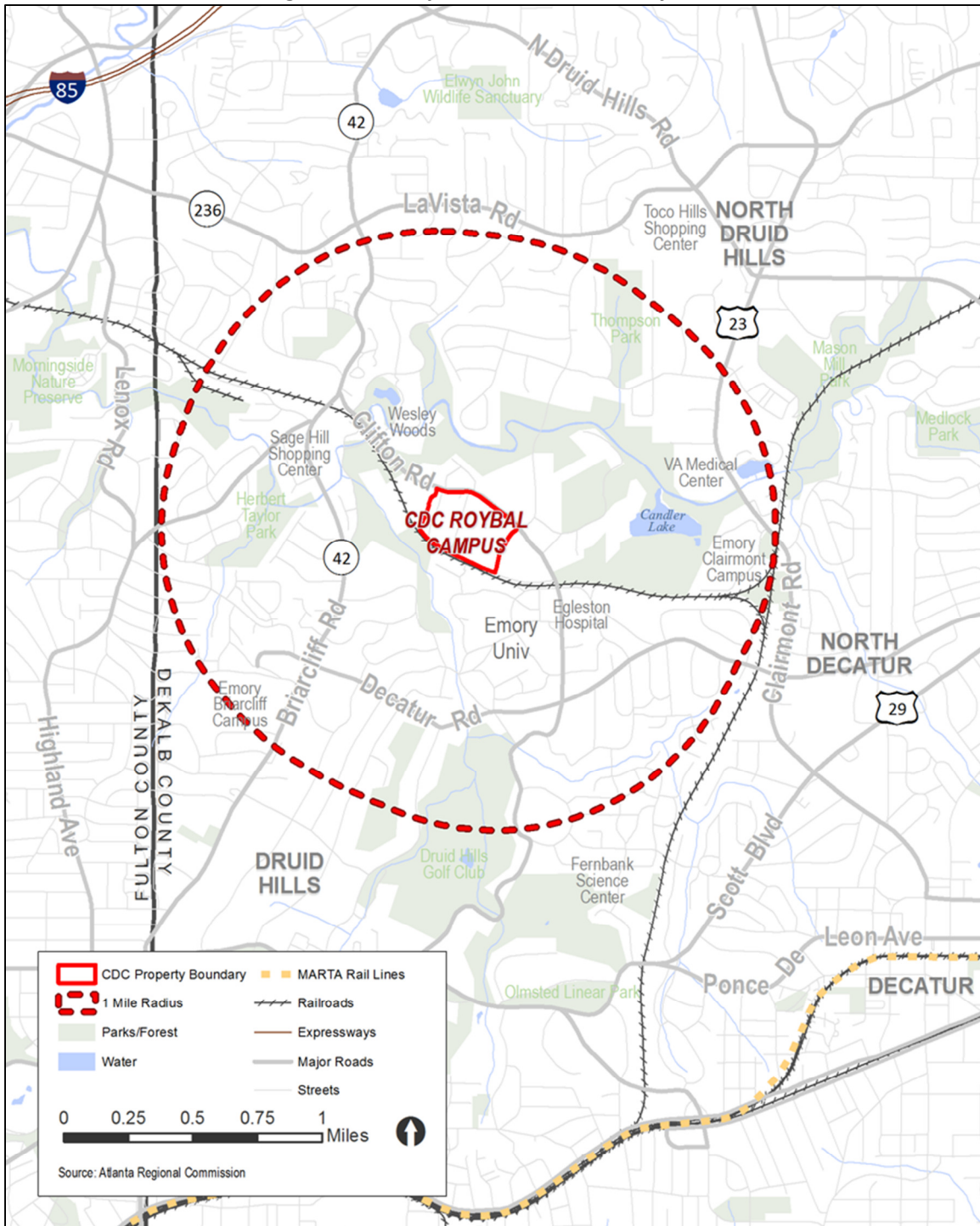
CDC is an OPDIV of HHS, dedicated to protecting health and promoting quality of life through the prevention and control of disease, injury, and disability. HHS/CDC is recognized as the lead Federal agency for protecting the health and safety of people, providing credible information to enhance health decisions, and promoting health through strong partnerships. HHS/CDC protects communities by controlling disease outbreaks; ensuring food and water are safe; preventing leading causes of death such as heart disease, cancer, stroke, and diabetes; and working globally to reduce health threats. The HHS/CDC has made momentous contributions to public health, including polio vaccines, smallpox eradication, and their response to the anthrax attacks in 2001. The Roybal Campus has served as the headquarters of the HHS/CDC since 1958 and is home to the Office of the Director, as well as many of the Agency's main infectious disease research facilities.

This DEIS has been completed through coordination with federal and state agencies and supports the Roybal Campus 2025 Master Plan Preferred Alternative, which is identified throughout this document as the Preferred Alternative. The DEIS identifies and assesses the potential impacts associated with the Preferred Alternative, and identifies mitigation, where appropriate.

ES.2 Purpose and Need

The Roybal Campus 2025 Master Plan (Master Plan) provides a framework for future growth on the Roybal Campus to ensure that the campus can support HHS/CDC's mission and to guide strategic decisions about the allocation of Federal resources. The Master Plan identifies a number of potential improvements to be completed through the 2015 to 2025 timeframe, and establishes design and planning guidelines. Improvements proposed under the Master Plan include new laboratory construction, existing building renovations, parking deck construction and infrastructure upgrades.

Figure ES-1: Project Location and Study Area



The purpose of the Master Plan is to provide a planning framework for the future physical development of the Roybal Campus in order to support HHS/CDC's evolving health mission and projected growth. The Master Plan provides an update of baseline existing conditions, evaluates a range of conceptual development alternatives, and identifies a preferred alternative for future development. The guiding principles of the Master Plan, as developed by HHS/CDC, are as follows:¹

- Accommodate current and future multi-program needs
- Promote a collaborative research environment
- Balance future development needs with site constraints and opportunities, while minimizing impacts to the surrounding area to the greatest extent practicable
- Design and construct all future buildings on the Roybal Campus in accordance with HHS/CDC's Interagency Security Council (ISC) and Security Services Office (SSO) requirements
- Integrate sustainable principles to minimize environmental effects and maximize the use of available resources
- Promote overall visual and aesthetic continuity of the 2000-2009 Master Plan through the application of design guidelines for buildings, as well as site elements
- All Master Plan elements should be cost effective and represent best value to design, construct, operate, maintain, and reinvest to make the best use of tax payer dollars
- Facilitate the health and productivity of employees through the provision of quality pedestrian environments, fitness facilities, and functional outdoor spaces
- Workplace safety should be inherent in all aspects of the campus Master Plan

HHS/CDC's mission is to serve as the national focus for developing and applying disease prevention and control, environmental health, and health promotion and health education activities designed to improve the health of the people of the United States. Mission change and growth resulting from emerging or reemerging infectious diseases, reclassification of pathogens and moderate program staff growth over time are expected to drive increases in laboratory and non-laboratory staff and demand for specialized space. The implementation of the Master Plan preferred alternative is needed in order for HHS/CDC to be able to respond quickly to new or increased mission requirements and growth through additional campus construction or reconfiguration.

ES.3 Alternatives

An extensive evaluation of eight (8) alternatives was conducted as part of the Master Planning Process. This process was undertaken in order to evaluate the suitability of each alternative to meet Master Plan goals and objectives. Evaluation criteria were developed in order to evaluate each development alternative against the same set of parameters. The evaluation criteria considered both HHS/CDC mission needs and environmental considerations. Strategic criteria included the ability to increase HHS/CDC mission readiness as well as operational requirements. Environmental considerations were a main component of the evaluation criteria. Environmental criteria considered during this process included the examination of regional and local planning policy, utility demand, air quality, commute time, transportation system capacity and greenhouse gas effects. The ability to mitigate any potential impacts was also considered. A detailed screening assessment was undertaken to understand the implications of the development alternatives on the local transportation network.

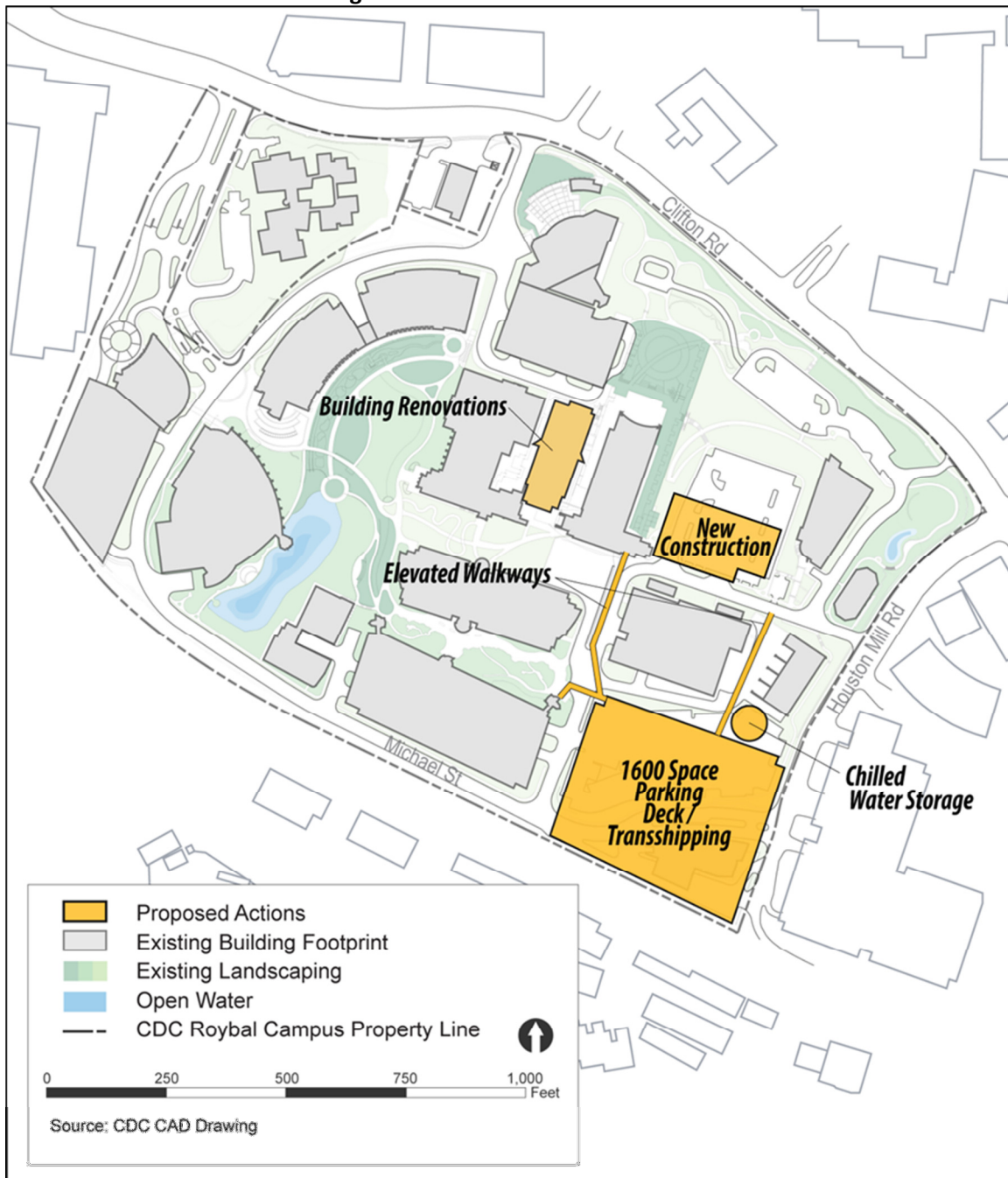
¹ CDC. Roybal Campus 2025 Master Plan.

Of the eight alternatives, two alternatives were deemed viable to be carried forward in the EIS for detailed analysis. These include Alternative 1. No Action, and Alternative 5a. Lab Focus Moderate, heretofore referred to as the “Preferred Alternative”. The remaining six alternatives were eliminated, as they either did not ultimately meet the future needs of the HHS/CDC in advancing their mission goals, were not capable of accommodating future background growth or would have introduced a new campus population density that would have resulted in adverse impacts on the local transportation network. Alternative 5a. Lab Focus Moderate represented a moderate growth of the campus population with moderate on-site expansion. Drivers that led to the selection of the Preferred Alternative included the fact that this alternative did not require: the planned relocation of existing programs; new real property acquisition; or new office building construction. The Preferred Alternative supports HHS/CDC’s mission goals, accommodates agency program requirements for the 2015-2025 planning horizon and minimizes potential adverse impacts. As HHS/CDC’s mission continues to evolve, program directives may be refined which may in turn necessitate reconsideration of campus growth in the future.

Preferred Alternative

The Preferred Alternative includes new laboratory construction, building renovation, parking expansion, and additional improvements to campus infrastructure. Implementation of the Preferred Alternative would increase the employee population by approximately 1,485 new occupants, from the current total of 5,308 to 6,793 in 2025. The various improvements associated with the Master Plan Preferred Alternative are described below and illustrated in Figure ES-2: Preferred Alternative.

Figure ES-2: Preferred Alternative



New Laboratory Construction. The HHS/CDC is proposing to construct a new laboratory building measuring approximately 350,000 to 450,000 gsf which would include approximately 60,000 gsf of below-grade space. The actual size of the new laboratory would be determined through a Project Development Study (PDS), and could include Biosafety Level (BSL) 2, 3, and 4 laboratory space, a vivarium, imaging labs, support for environmental microbiology, support for Advanced Molecular Detection (AMD), or similar support spaces. The new laboratory would be constructed on an existing surface

parking lot located in the eastern portion of the campus. Construction of the new laboratory on existing surface parking would eliminate approximately 150 existing surface parking spaces.

New Parking Deck Construction and Reorganization of the Transshipping Facility. A new, approximately 1,600 space parking deck is proposed as part of the Preferred Alternative. The new parking deck would be constructed in the southeastern portion of the campus, which currently consists of a surface parking lot and transshipping facility. The existing transshipping facility and proposed parking deck would be configured to allow for optimum campus and parking deck access, while also accommodating infrastructure improvements and other support services, including a new chilled water storage unit, stormwater detention, and special vehicle parking. The southeastern campus entrance would be reconfigured to improve the efficiency of vehicle and pedestrian entry. Construction of the new parking deck, along with the new laboratory would eliminate existing surface parking spaces and result in a net increase of approximately 1,200 parking spaces. The existing campus parking cap set by the 1996 Roybal Campus EIS would increase from 3,300 total spaces to approximately 4,500 total spaces.

Building Renovation. An existing laboratory on campus would undergo major renovation in accordance with the HHS/CDC Building 15 Modernization Master Plan (January 2013).

Infrastructure Upgrades. As part of the new parking deck construction and transshipping reorganization, a new chilled water storage unit would be constructed in order to meet water usage reduction, energy reduction and efficiency objectives. The new chilled water storage unit would be constructed just north of the parking deck. Additional infrastructure improvements also would include construction of stormwater detention under the new parking deck, new landscaping and formal outdoor plaza space, as well as new elevated pedestrian walkways connecting the parking deck to the new laboratory and adjacent laboratory.

No Action Alternative

CEQ regulations identified in Section 1502.14(d), require that the evaluation of alternatives in the DEIS include the “alternative of the no action”. The No Action Alternative serves as a baseline, which allows decision makers to compare the environmental consequences of continuing to operate under current conditions against the consequences of the Preferred Alternative. The No Action Alternative represents continued operation of the existing facilities at the Roybal Campus without any new construction or any major renovations of interiors or building additions over the ten-year planning period, from 2015 to 2025 (Figure ES-3: No Action Alternative). Under the No Action Alternative, the Roybal Campus would experience employment growth of approximately 865 new occupants, with a projected population of 6,173 by 2025. This growth would be accommodated within the existing office, laboratory and support space. There would be no construction of additional parking under the No Action Alternative. The existing campus parking cap of 3,300 space set by the 1996 Roybal Campus EIS Record of Decision (ROD) would remain in place. The No Action Alternative assumes that reasonably foreseeable development and growth would continue to occur outside the campus between 2015 and 2025.

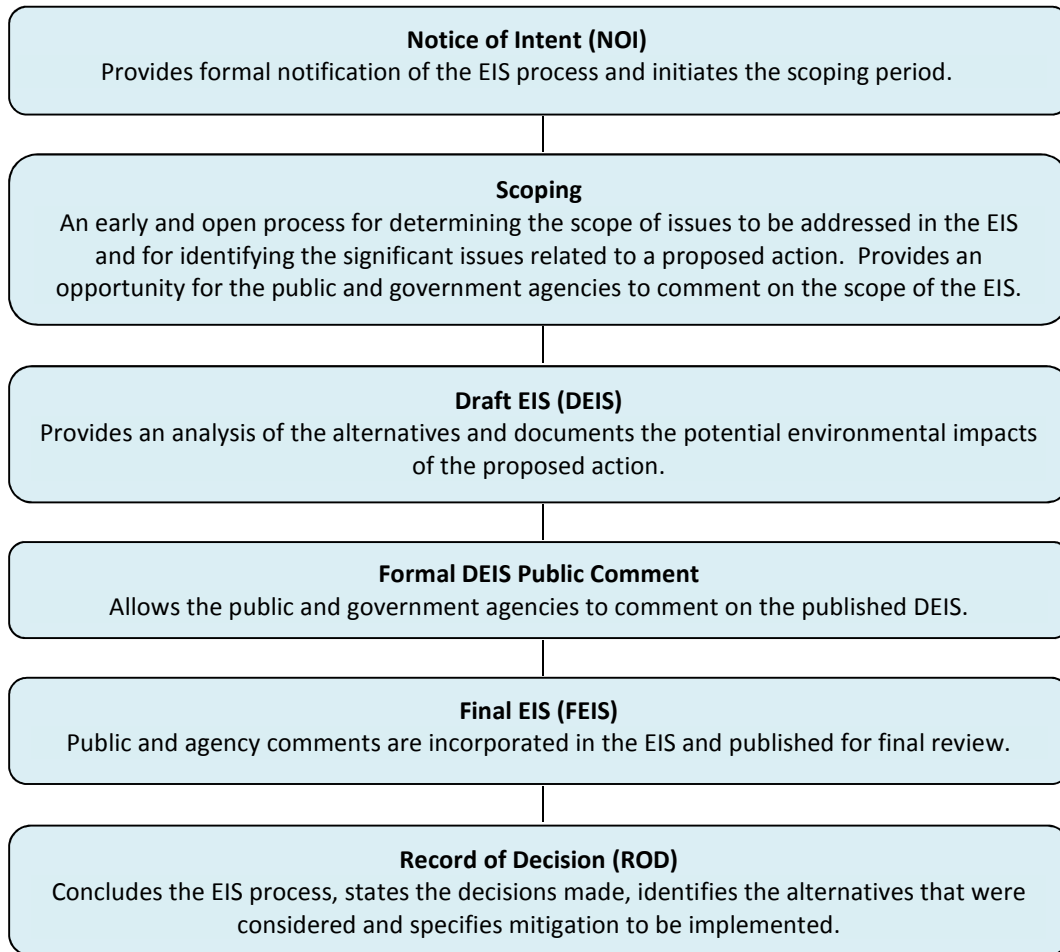
Figure ES-3: No Action Alternative



ES.4 Public Involvement

The National Environmental Policy Act (NEPA) of 1969 establishes national policy for the protection of the environment. In 1978, the Council on Environmental Quality (CEQ) issued *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 CFR § 1500-1508) to assist federal agencies in complying with the provisions of the NEPA. The major objectives of NEPA

are to ensure the careful consideration of environmental effects of proposed actions in the federal decision-making process and to disclose the information to the public. Furthermore, NEPA procedures require federal agencies to evaluate reasonable alternatives that would avoid or minimize adverse impacts prior to making a decision and before proceeding with the action. The EIS is the most comprehensive level of environmental review under NEPA. HHS/CDC serves as the lead agency under NEPA and is responsible for preparing the NEPA documentation and final approval of the project. The key components of the EIS process are:



Public involvement is an important aspect of the NEPA process. Public input is critical to allow public officials to make informed decisions. As identified above, there are several opportunities throughout the EIS process for the public and government agencies to be informed about the proposed action and provide input.

The HHS/CDC initiated the public scoping process for this DEIS on December 17, 2012, with the publication of a Notice of Intent (NOI) in the Federal Register for the proposed Master Plan. The scoping process is a procedural requirement of NEPA and serves to identify the full range of environmental issues and alternatives to be evaluated in an EIS.² The scoping process provides an opportunity for the

² CEQ NEPA Regulations, 40 C.F.R. § 1501.7.

public and agencies to learn about the proposed action, alternatives and comment on potential environmental issues to be addressed in the EIS.

The public scoping comment period began on December 17, 2012 and continued through February 1, 2013. A scoping meeting was held on January 17, 2013 at the Roybal Campus. The public and agencies were notified of the scoping period and scoping meeting through publications in the Federal Register, advertisements in local newspapers and websites, and mailings. A copy of the NOI, a detailed summary of the scoping activities, and comments received during the scoping period are contained in Appendix A of the DEIS. During the DEIS preparation, HHS/CDC also met with and consulted with numerous agencies, adjacent institutional land owners and organizations to provide information of the proposed undertaking, identify potential issues and to solicit information related to the preparation of the DEIS .




The publication of this DEIS will initiate a 45-day public comment period. As part of this comment period, HHS/CDC will conduct public meetings to solicit comments on the DEIS. Comments received during the 45-day comment period and public meetings will be reviewed and incorporated into the FEIS, as appropriate. A ROD would be issued no less than 30 days after the FEIS is published.




ES.5 Summary of Environmental Impacts




Table ES-1 provides an overview of potential impacts anticipated under the No Action Alternative and the Preferred Alternative, organized by resource category. These resource categories or analysis areas cover a number of environmental impact categories ranging from land use and zoning to transportation and urban design. The impacts, noted below, are addressed in additional detail in Section 3. Affected Environment and Environmental Consequences of the DEIS.


Table ES-1: Summary of Impacts by Alternative

EIS Resource Section/Subsection	No Action Alternative	Preferred Alternative		
		No Impact ○	Minimal Impact ◐	Significant Impacts ●
Socioeconomics	The No Action Alternative would not displace any residences or businesses in the Study Area. Staffing at the Roybal Campus is anticipated to increase by an estimated 865 employees by 2025. The increased employee population would generate additional spending at the local level.	The Preferred Alternative would not displace any residences or businesses in the Study Area. Staffing at the Roybal Campus is anticipated to increase by an estimated 1,485 employees by 2025. The increased employee population would generate additional spending at the local level. On a regional level, the short-term increase in employment associated with construction and construction-related activity would be expected to filter through the local economy, generating consumer and business spending. Significant adverse socioeconomic impacts are not anticipated.		
Land Use, Zoning & Public Policy	Land uses on the Roybal Campus would remain the same. The employee population increase is not anticipated to induce changes to land use or zoning in the Study Area. No zoning changes are expected in the vicinity of the Study Area. Development trends are consistent with local and regional public policy initiatives, including the DeKalb County's Comprehensive Plan.	The Preferred Alternative would not directly change land use or zoning and would not conflict with existing public policies. The Preferred Alternative would slightly increase the density of existing institutional uses. Significant adverse land use or zoning impacts are not anticipated. The Preferred Alternative is not anticipated to result in a significant adverse impact related to public policy.		

Community Services and Facilities/Cohesion	<p>There would be no direct effect on community resources or community cohesion within the Study Area. Existing open space on campus would support employee growth. There are sufficient community services to accommodate the additional demands resulting from employee growth.</p> <p>Study Area open space resources and services would not be overburdened by the No Action Alternative.</p>	<p>The implementation of the Preferred Alternative would not physically displace or alter any community facilities within the Study Area. Existing open space on campus would support employee growth. There are sufficient community services to accommodate the additional demands resulting from employee growth. Based on current neighborhood and campus demographic trends, it is assumed that only a small portion of the future employee population would seek residence within the Study Area. This additional population would have a negligible impact on the community facilities and services.</p> <p>The Preferred Alternative would contribute to increased traffic within the Study Area which may affect fire and emergency response times.</p>	
Transportation	<p>Congestion would continue to increase in the future without the Preferred Alternative in place due to the background growth contributed by major employment centers and institutions located within the Clifton Corridor. These destinations, as world-renowned educational, medical and research facilities also function as destinations within the Clifton Corridor which attract travelers from beyond the Clifton Corridor.</p>	<p>The Preferred Alternative is anticipated to generate traffic that would result in significant impacts to intersections in the traffic Study Area. When considering the projected background growth by the year 2025, in addition to growth from the project, and the lack of transportation improvements planned for the area, the majority of intersections and roadways serving the Clifton Corridor are anticipated to function at unacceptable levels of service with long vehicle delays and congestion.</p> <p>New vehicle trips generated as a result of the implementation of the Master Plan are anticipated to further exacerbate poor traffic conditions.</p>	
Air Quality	<p>DeKalb County is designated as not in attainment for particulate matter (PM_{2.5}) and ozone (O₃) of the NAAQS. The No Action Alternative would not cause nor contribute to any localized violations nor increase the frequency or severity of any existing NAAQS violations. Facility air emissions at the Roybal</p>	<p>DeKalb County is designated as not in attainment for particulate matter (PM_{2.5}) and ozone (O₃) of the NAAQS. The Preferred Alternative would result in a minimal increase in emissions; however it would not cause nor contribute to any localized violations nor increase the frequency or severity of any existing NAAQS violations. Therefore, the Preferred Alternative would not result in significant adverse air quality impacts.</p> <p>The Preferred Alternative proposes to construct a new laboratory building and parking deck. Neither of these additions was</p>	

	Campus are currently controlled by a Title V permit. No changes in emissions that would affect existing permit conditions are expected under the No Action Alternative.	determined to require new boiler capacity or back-up power systems, as the existing Roybal Campus energy budget would sufficiently support both new facilities within Title V permit operational parameters. No changes in emissions that would affect the existing permit conditions are expected.	
Noise	Background traffic volumes would increase to reflect expected growth in overall travel through and within the area, major real-estate developments, institutional expansions, and roadway physical and/or operational system changes scheduled to be occupied or implemented by 2025.	<p>The proposed increase in vehicle trips as a result of the Master Plan would not result in any increase to sound levels above the impact thresholds; and would therefore have no impact on adjacent noise-sensitive receivers.</p> <p>Construction activity would result in temporary noise impacts and would cease once construction is completed. Significant adverse noise related-impacts are not anticipated.</p>	
Cultural Resources	Historic resources within the Study Area would remain similar to existing conditions. No disturbance or alterations to existing cultural or historic resources within the Study Area would occur.	The improvements associated with the Master Plan would be limited to the self-contained Roybal Campus. The Preferred Alternative would not result in impacts to cultural resources within the Study Area or beyond. The HHS/CDC has determined that the implementation of the Roybal Campus 2025 Master does not have the potential to cause affects to historic resources, therefore no further coordination under Section 106 of the NHPA is anticipated. HPD correspondence indicated that the proposed undertaking does not have the potential to result in historic resource impacts and concurred with the HHS/CDC that no further coordination under Section 106 of the NHPA is required. Significant adverse impacts to cultural resources are not anticipated.	
Urban Design and Visual Resources	No new construction, major renovations adding significant population or infrastructure improvements would occur on campus. There would be no physical changes to the Roybal Campus. As such, the No Action Alternative would not result in significant adverse impacts to urban design features or the visual character of the area.	<p>The Preferred Alternative would introduce new structures that would be in keeping with the existing height, massing, density and scale of buildings on the Roybal Campus and along Clifton Road. The new laboratory would not be higher than any existing buildings on campus. Therefore, the Preferred Alternative would not result in significant impacts to urban design features and visual resources.</p> <p>Significant adverse impacts to urban design and visual resources are not anticipated.</p>	

Natural Resources (Geology, soils, topography, water resources, water quality, vegetation, floodplains, wildlife and protected species)	The No Action Alternative would not result in significant impacts to campus geology, soils, topography, vegetation, water resources, protected species, or floodplains.	The Preferred Alternative would not result in significant impacts to campus geology, soils, topography or vegetation on-site as all construction would occur on previously disturbed areas. BMPs would be implemented in compliance with stormwater regulations and would minimize impacts to stormwater during and post construction. Floodplains and protected species are not present on-site, and therefore significant flood-related impacts and impacts to protected species would not occur as a result of the Preferred Alternative. Significant adverse impacts to natural resources are not anticipated.	
Utilities	The projected employment increase of 865 individuals would result in a minimal increase in electricity, domestic water, natural gas consumption and the amount of sewage generated on campus, as all employees would be accommodated within the existing office, laboratory and support spaces on campus. The No Action Alternative would minimally increase demands on the heating or cooling systems and capacity improvements would not be required. Under the No Action Alternative, impervious surfaces would not be constructed on campus and consequently additional stormwater runoff would not be generated. The campus would continue to pursue projects to comply with more restrictive spill protection and NPDES regulations.	The Preferred Alternative would result in an increase in electricity, domestic water, natural gas consumption and sewage generation on campus, as well as increase the demand for steam and chilled water. However, the Preferred Alternative would not result in significant adverse impacts to existing utility service providers, the HHS/CDC steam or chilled water systems, or the storm sewer system. Additional stormwater runoff would not be generated by the Preferred Alternative and additional storage capacity would not be required. BMPs consisting of underground structural water quality devices would be implemented in compliance with stormwater regulations and would minimize impacts to stormwater during and post construction. A NPDES General Permit for Construction would be required.	
Waste	The character of the waste would remain the same, however the	The additional employees and related increase in laboratory and office operations would result in a moderate increase in waste	

	amount of waste generated on site would increase slightly due to the additional employees on campus. Waste would continue to be handled in accordance with HHS/CDC policies as well as applicable state and federal regulations. Waste would continue to be transported off-site by contracted waste haulers.	generated on campus. However, the character of the waste would remain the same. A new laboratory would moderately increase the amount of research activity occurring on campus and generate additional biomedical and hazardous waste. Construction of the new laboratory and building renovations would temporarily increase the amount of construction debris. HHS/CDC would continue to dispose of waste in accordance with HHS/CDC policies and applicable local, state, and federal regulations. Significant impacts related to waste generation are not anticipated.	
Greenhouse Gases and Sustainability	The HHS/CDC is moving towards meeting or exceeding the targets associated with federal sustainability mandates. The HHS/CDC would continue to institute sustainability practices and programming in order to meet or surpass these federally mandated sustainability thresholds. GHG emissions related to vehicle miles travelled were estimated at 6,682 tons of CO ₂ for the Preferred Alternative.	The Preferred Alternative would not result in major emissions of GHG. According to CEQ if a proposed action would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of CO ₂ equivalent (mtCO ₂ e) on an annual basis, agencies should consider this an indicator that a detailed assessment may be meaningful to decision makers and the public. GHG emissions related to vehicle miles travelled were estimated at 7,929 tons of CO ₂ for the Preferred Alternative. The GHG emissions falls well under 25,000 mtCO ₂ e. As a result, the Preferred Alternative is not anticipated to cause significant adverse greenhouse gas generation or climate change impacts. The HHS/CDC would continue to comply with or work towards compliance of all federal regulations pertaining to sustainability. The Preferred Alternative would not result in significant adverse impacts associated with greenhouse gases.	

ES.6 Mitigation Measures

Pursuant to NEPA (40 CFR § 1502.14(f)), an EIS must include appropriate mitigation measures not already included in the proposed action or alternatives. According to 40 CFR § 1508.20, mitigation includes:

- Avoiding the impact altogether by not taking a certain action or parts of an action;
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and,
- Compensating for the impact by replacing or providing substitute resources or environments.

According to the impact assessments conducted as part of the environmental review of the Preferred Alternative, transportation is the only environmental resource area where a significant adverse impact has been identified. The technical impact analyses are contained in Section 3. Affected Environment and Environmental Consequences of the DEIS. In addition, the Preferred Alternative would contribute to direct as well as cumulative traffic impacts. As the traffic impacts result from the combined action of numerous entities, mitigation would require a collaborative approach from local, state and federal agencies. Mitigation measures to minimize traffic impacts associated with the Preferred Alternative are described below. Mitigation measures identified below include both those that can be implemented by the HHS/CDC as well as suggested measures that are beyond the jurisdiction of the HHS/CDC and would have to be carried by other private and public entities. As the HHS/CDC does not have authority to spend federally-appropriated money on non-Federal property without specific legislation; the HHS/CDC would work with federal, state, and local government to determine the feasibility and funding for these mitigation measures.

Traffic Mitigation

The Preferred Alternative is anticipated to generate traffic that would result in significant impacts to intersections in the traffic Study Area. When considering the projected background growth by the year 2025, and lack of transportation improvements planned for the area, the majority of Study Area intersections are anticipated to function at unacceptable levels of service with long vehicle delays and congestion.

New vehicle trips generated as a result of the Preferred Alternative would further aggravate traffic conditions within the Study Area. Traffic mitigation proposed as part of this assessment is limited to cost-effective, readily implementable improvements. Proposed mitigation measures include:

- Signalization;
- Signal Optimization/Retiming;
- Lane Restriping; and,
- Widening (only approaches that may have sufficient right-of-way)

All traffic Study Area intersections would require signal optimization. New traffic signals are recommended for the intersections of Briarcliff Road and Shepards Lane and at the Houston Mill Road HHS/CDC Entrance. Full signal warrant studies should be conducted to verify the feasibility of this

recommendation. In addition, it is recommended that intersection improvements are made at the locations referenced in Table ES-2, below.

Table ES-2: Proposed Intersection Improvements

Intersection	Improvements	Responsible Agency
Clifton Road/Briarcliff Road	An additional left turn lane on the southbound Briarcliff Road approach is recommended. The additional lane would require roadway widening.	DeKalb County/GDOT
Clifton Road/Old Briarcliff Road	A left turn lane on the westbound approach of Clifton Road is recommended. The additional lane would require roadway widening.	DeKalb County/GDOT
Clifton Road/HHS/CDC Main Entrance	A 2nd left turn is recommended on the Clifton Road eastbound approach. The northbound approach at the HHS/CDC Main Entrance should be restriped to allow for two left turn lanes and one shared thru-right lane. Both recommendations would be limited to restriping and would not require roadway widening. In addition, the signal phasing should be modified to a northbound/southbound split-phase configuration.	HHS/CDC/DeKalb County/GDOT
Houston Mill Road/ HHS/CDC Entrance	Install new traffic signal.	HHS/CDC/DeKalb County/GDOT
Briarcliff Road and Shepards Lane	Install new traffic signal.	DeKalb County/GDOT
North Decatur Road/Clifton Road	A short right turn lane on the northbound approach of Clifton Road is recommended. Two new receiving lanes are recommended on Southbound Clifton Road. While these improvements would require roadway widening, there appears to be sufficient right-of-way (ROW) available. In addition, the Clifton Road southbound right-turn lane should be restriped to a shared thru-right lane.	DeKalb County/GDOT

While these improvements would not solve the Study Area's traffic congestion issues, they would help to improve traffic efficiency and result in operating conditions similarly experienced under the No Action Alternative.

Further analysis of the proposed mitigation measures is required to assess the feasibility and/or viability of these improvements. In addition, the future implementation of these measures would require coordination with various local agencies including GDOT and DeKalb County.

In addition to roadway specific mitigation measures, alternative mitigation strategies, such as Transportation Demand Management (TDM) and policy initiatives to reduce traffic congestion are noted below. The discussion focuses on the applicability of alternative mitigation strategies at the Roybal Campus, however these measures could also be implemented by other institutions and employers within the Study Area in an effort to reduce traffic congestion. A detailed discussion of these mitigation strategies is provided in Section 3.4 Transportation of the DEIS.

Transportation Demand Management and Policy Initiatives

Transportation Demand Management (TDM) is typically employed to increase overall transportation system efficiency by encouraging a shift from single-occupancy vehicle travel to non-single occupancy travel modes, or shifting automobile trips outside of peak commuting periods. TDM looks to decrease automobile trips and associated vehicle miles traveled (VMT) by providing incentives and programming to assist individuals to modify their travel behavior.³ TDM strategies can be implemented via governmental agencies, employers or local partnerships. The HHS/CDC is currently engaged in or has previously attempted a variety of TDM strategies (see Table ES-3). The HHS/CDC continues to examine ways to enhance or improve upon existing TDM programs. Further integration and/or implementation of TDM strategies which could further contribute to the reduction of vehicle congestion and improvement of traffic conditions within the transportation Study Area are noted in Table ES-3.

Policy initiatives that could help alleviate traffic conditions at the Roybal Campus and its surroundings, if implemented, and other non-physical mitigation recommendations are also identified in Table ES-3.

Table ES-3: Non-Physical Mitigation Types

Type of Initiative	Description/Recommendation
TDM	
Employee-Based Transportation Programs	Programs designed to reduce single-occupancy motor vehicle use for commuter travel. Examples include telecommuting, videoconferencing to reduce work-related travel; flexible work schedule or stagger shifts to facilitate travel to campus during off-peak commuting hours.
Carpooling/Vanpooling	Currently, HHS/CDC offers preferred carpool/vanpool parking for its employees. The provision of free vanpool or carpool vehicles would eliminate the need for employees to bring a private car to work. This would function as another means to potentially increase participation in the carpool/vanpool program. Free taxi ride vouchers for late night trips or trips outside of normal mass transit hours might be another incentive for employees.
Bicycling and Pedestrian Activity	The HHS/CDC offers secure campus parking for bicycles. Pedestrian pathways are located throughout the campus. Shower and locker facilities are also available to staff who wish to walk or cycle to work. These existing facilities and future associated enhancements could make these non-automobile options more attractive.
Campus Amenities	A garden market, on-site day care facilities, fitness center and food services are amenities that mirror local commercial convenience uses found within the Clifton Corridor. The presence of these on-campus uses may help to reduce off-site trips into the community.
Institute Additional Clean Commute Days	HHS/CDC has conducted "Try-It-Days" over the last three years (FY 2010 - 2012) at each of their metro Atlanta facilities. The implementation of several clean commute

³ Seattle Urban Mobility Plan. *Best Practices Transportation Demand Management (TDM)*. January 2008. p. 7A-1.

	days throughout the calendar year would help to reinforce the sustainable culture of the HHS/CDC.
Policy	
Parking Management/ Charging for Campus Parking	Currently, on-site parking at the Roybal Campus is free. Free parking tends to lead to overuse as well as all-day parking. The installation of an electronic parking guidance system to direct motorists from campus entrances to available parking locations could help to reduce idling, associated fuel consumption, and make campus parking operations slightly more efficient. Shifting to a pay to park scenario, in combination with the sustainable transit initiatives currently implemented at the HHS/CDC, may help to reduce single occupancy vehicles traveling to the Roybal Campus.
Parking Cash Out	HHS/CDC would charge employees to park on campus while providing campus personnel with a monetary increase to offset the cost to park. The parking cash-out would enable employees to use these funds for on-site parking or if they decided to use an alternate mode.
Marketing the Use of Park and Ride	Lots would help to reduce parking demand in corridor as well as the automobiles traveling through area neighborhoods to corridor destinations.
Peak-Period Transit Priority Lanes	The potential for a "Transit-Only" lane exclusively during peak commuting should be explored. These lanes would revert back to standard traffic lanes for cars during non-peak commuting hours.
Transit Reimbursement/ Commuter Rewards Program	Currently, HHS/CDC participates in a public transportation subsidy program known as Fare Share. An additional subsidy provided to HHS/CDC personnel (i.e., prize, free or low-cost MARTA Breeze cards/transit passes) may incentivize additional employees to use clean commuter modes of transit.
Connections to Existing Mass Transit	Concept would use a carpool/vanpool fleet to connect the Roybal Campus with existing MARTA bus service stops within the Study Area as well as MARTA rail station beyond the Study Area.
Cliff Shuttle Service Funding	Cliff service is currently available to Emory students, staff, and the general public. Emory representatives have indicated that Cliff is approaching its ridership capacity. If ridership increases in the future, Emory may revise this policy relative to public access to the Cliff service. If the HHS/CDC were to provide additional funding to the Cliff, it would enable this crucial corridor transportation system to continue to provide services to HHS/CDC employees and the public.

Congestion and increases in traffic would occur in the future irrespective of the implementation of the Preferred Alternative due to the background growth contributed by the major institutions located within the Clifton Corridor. These destinations, as world-renown educational, medical and research institutions also function as destinations within the Clifton Corridor which attract travelers from beyond the Clifton Corridor.

The HHS/CDC's mandate relates solely to the protection of the nation's health and the institution of mitigation measures beyond its facilities and campuses is beyond the scope of their mission. However, as indicated above, the HHS/CDC employs a number of TDM measures on the Roybal Campus designed to provide transportation alternatives to the single-occupancy vehicle and incentivize employees. This programming helps to reduce car traffic to the campus and also promotes public health and exercise (bicycling, walking).

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1 Introduction, Purpose and Need

1.1 Introduction

The Centers for Disease Control and Prevention (CDC), an Operating Division (OPDIV) of the Department of Health and Human Services (HHS) has prepared a Draft Environmental Impact Statement (DEIS) to assess the potential impacts associated with the implementation of the Roybal Campus 2025 Master Plan (Master Plan) for HHS/CDC's Edward R. Roybal Campus (Roybal Campus) located at 1600 Clifton Road, N.E. in Atlanta, Georgia. A new long-range Master Plan was prepared to guide the future physical development of the Roybal Campus for the planning horizon of 2015 to 2025 in order to support HHS/CDC's mission and program requirements. The HHS/CDC has prepared this DEIS in accordance with the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321 et seq.), the Council on Environmental Quality (CEQ) implementing regulations (40 CFR § 1500-1508) and the HHS General Administration Manual (GAM) Part 30 Environmental Procedures, dated February 25, 2000.

CDC is an OPDIV of HHS, dedicated to protecting health and promoting quality of life through the prevention and control of disease, injury, and disability. HHS/CDC is recognized as the lead Federal agency for protecting the health and safety of people, providing credible information to enhance health decisions, and promoting health through strong partnerships. HHS/CDC protects communities by controlling disease outbreaks; ensuring food and water are safe; preventing leading causes of death such as heart disease, cancer, stroke, and diabetes; and, working globally to reduce health threats. The HHS/CDC has made momentous contributions to public health, including polio vaccines, smallpox eradication, to their response the anthrax attacks in 2001. The Roybal Campus has served as the headquarters of the HHS/CDC since 1958 and is home to the Office of the Director, as well as many of the Agency's main infectious disease research facilities.

The Roybal Campus is situated on 46.7 acres, just outside the eastern limits of the City of Atlanta in DeKalb County, Georgia (Refer to Figure 1.1-1: Project Vicinity). The campus is located between Interstate 85 and 20 and is located within the Clifton Corridor. The Clifton Corridor is a transportation corridor that extends along Clifton Road and includes a mix of neighborhoods, activity centers and thoroughfares within unincorporated DeKalb County, the City of Atlanta and the City of Decatur.¹ The Clifton Corridor represents one of the largest employment centers within the metro Atlanta area and is home to several major employers including HHS/CDC, Emory University, Emory Healthcare, and the Veterans Affairs (VA) Medical Center. The Hartsfield-Jackson International Airport is located approximately 16 miles southwest of the campus. The Roybal Campus is located adjacent to Emory University and is surrounded by a mix of residential and institutional uses. Decatur Station, the closest MARTA station is located approximately 2 miles southwest of the campus. Refer to Figure 1.1-2: Project Location and Study Area for the location of the Roybal Campus.

¹ MARTA and Clifton Corridor Transportation Managements Association (CCTMA). *Clifton Corridor Alternative Analysis: Existing Conditions and Future Trends Report*. January 2010. Prepared by AECOM/JJG.

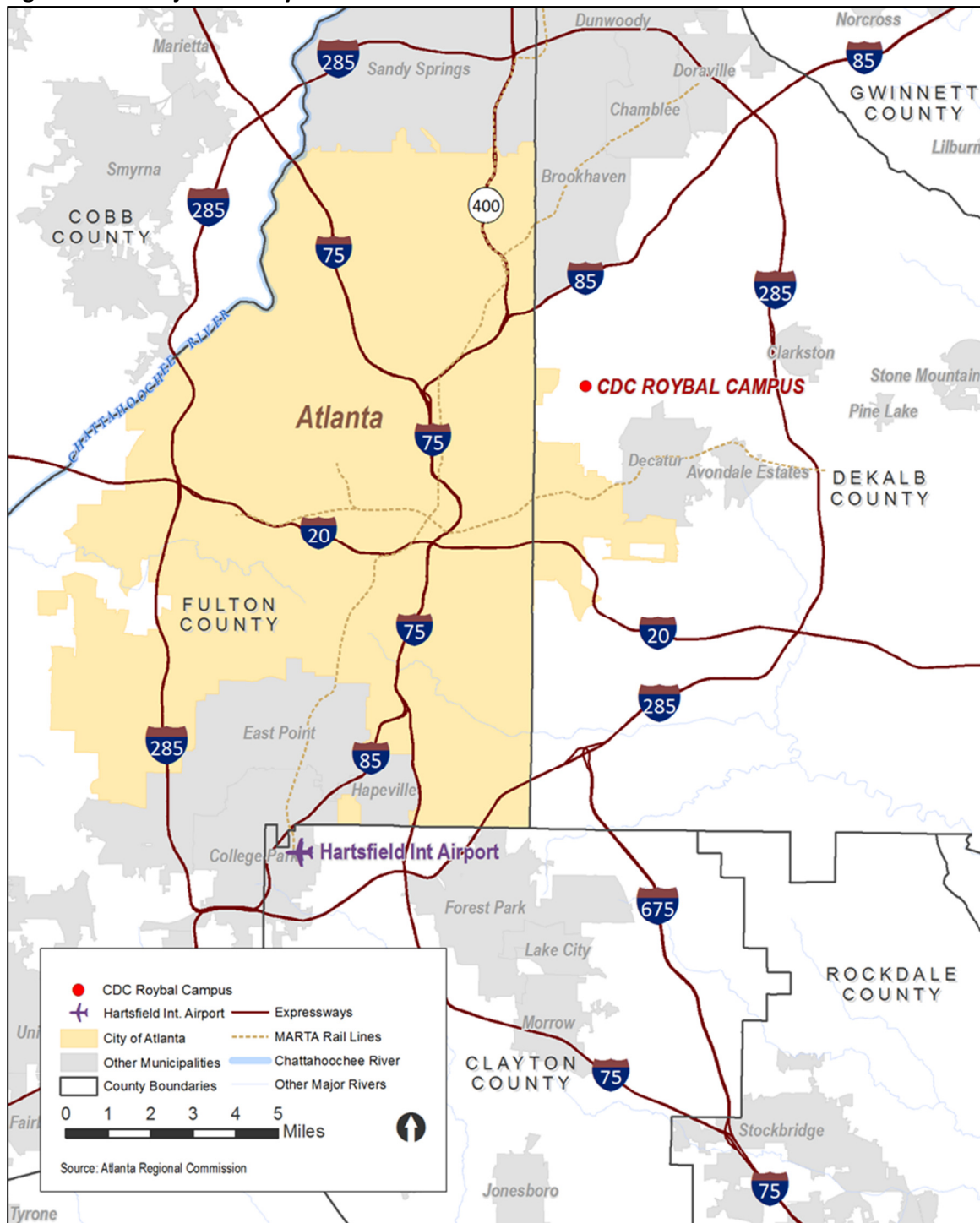
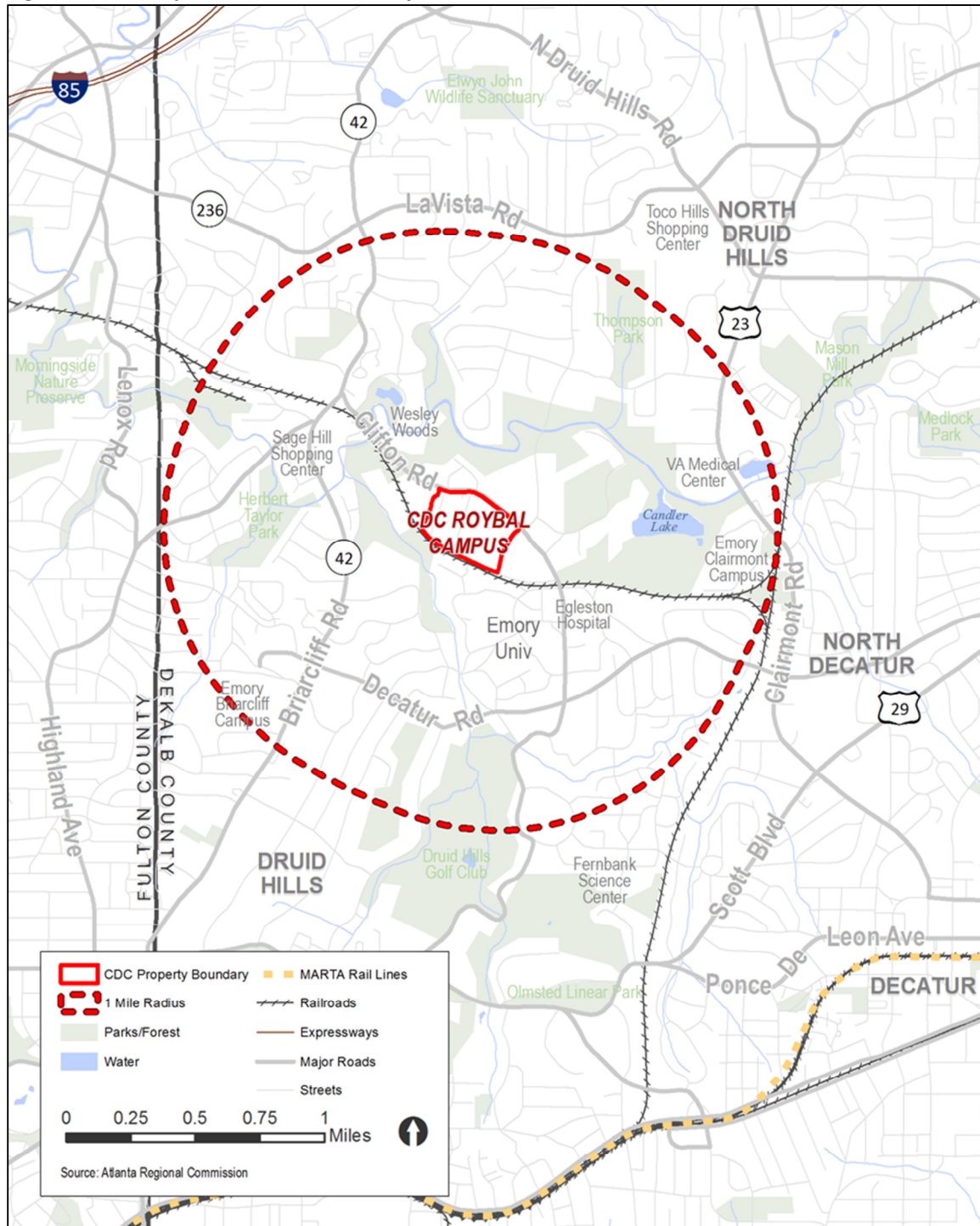
Figure 1.1-1: Project Vicinity

Figure 1.1-2: Project Location and Study Area



1.2 Purpose of the Proposed Action

The Proposed Action assessed in the DEIS is the implementation of the Roybal Campus 2025 Master Plan (Master Plan) preferred alternative. The Master Plan provides a framework for future growth on the Roybal Campus in order to ensure that the campus can support HHS/CDC's mission and to guide strategic decisions about the allocation of Federal resources. The Master Plan identifies a number of potential improvements to be completed through the 2015 to 2025 timeframe, and establishes design and planning guidelines. Improvements proposed under the Master Plan include new laboratory construction, existing building renovation, parking expansion, and infrastructure upgrades. The current Roybal Campus Master Plan provided a planning framework from 2000 through 2009. The HHS/CDC completed the proposed construction and demolition projects outlined in the 2000-2009 Master Plan and an EIS was completed in 1996.

The purpose of the Master Plan is to provide a planning framework for future physical development of the Roybal Campus in order to support HHS/CDC's evolving health mission and projected growth. The Master Plan provides an update of baseline existing conditions, evaluates a range of conceptual development alternatives, and identifies a preferred alternative for future development. The guiding principles of the Master Plan, as developed by HHS/CDC, are as follows:²

- Accommodate current and future multi-program needs
- Promote a collaborative research environment
- Balance future development needs with site constraints and opportunities, while minimizing impacts to the surrounding area to the greatest extent practicable
- Design and construct all future buildings on the Roybal Campus in accordance with HHS/CDC's Interagency Security Council (ISC) and Security Services Office (SSO) requirements
- Integrate sustainable principles to minimize environmental effects and maximize the use of available resources
- Promote overall visual and aesthetic continuity of the 2000-2009 Master Plan through the application of design guidelines for buildings, as well as site elements
- All Master Plan elements should be cost effective and represent best value to design, construct, operate, maintain, and reinvest to make the best use of tax payer dollars
- Facilitate the health and productivity of employees through the provision of quality pedestrian environments, fitness facilities, and functional outdoor spaces
- Workplace safety should be inherent in all aspects of the Master Plan

1.3 Need for the Proposed Action

HHS/CDC's mission is to serve as the national focus for developing and applying disease prevention and control, environmental health, and health promotion and health education activities designed to improve the health of the people of the United States.

² CDC. Roybal Campus 2025 Master Plan.

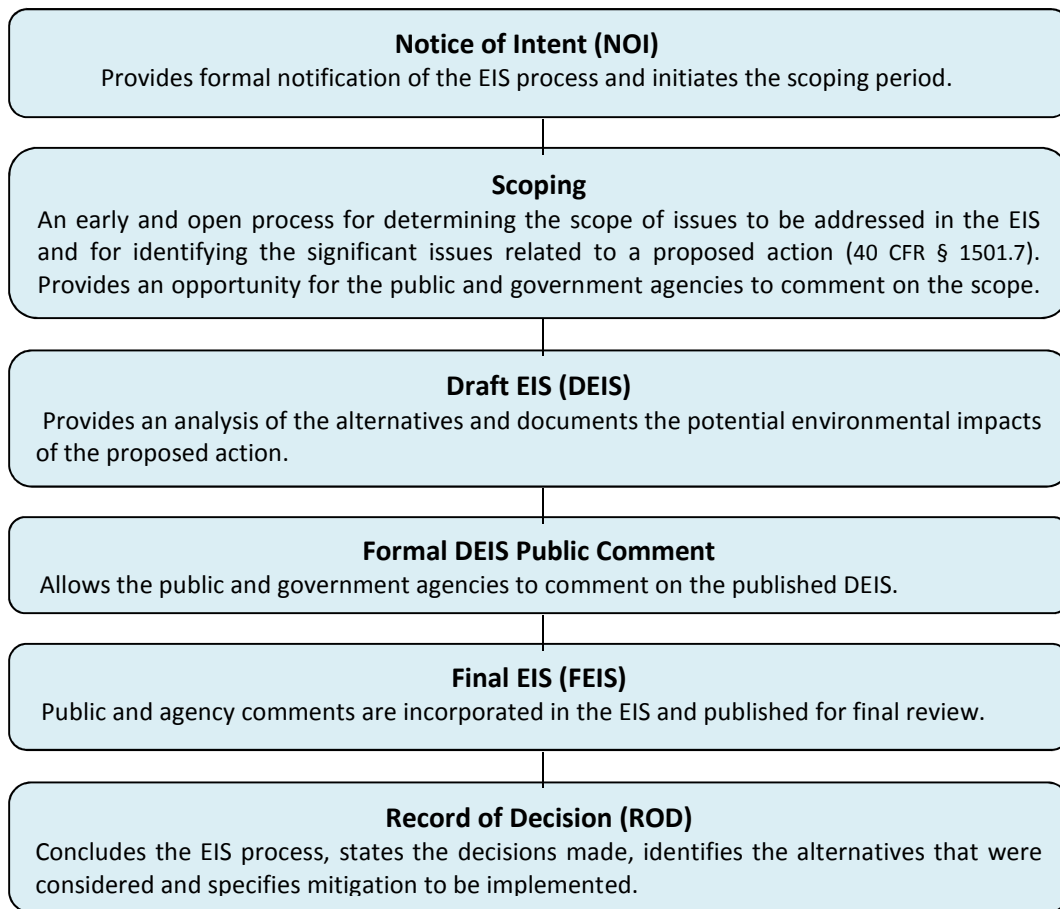
To accomplish its mission, HHS/CDC identifies and defines preventable health problems and maintains active surveillance of diseases through epidemiologic and laboratory investigations and data collection, analysis, and distribution. HHS/CDC is the U.S. Public Health Service's (PHS) lead agency in developing and implementing programs relating to environmental health problems and effective disease prevention, control, and health promotion. It administers a national program to develop recommended occupational safety and health standards to assure safe and healthful working conditions for every working person. HHS/CDC is responsible for controlling the introduction and spread of infectious diseases, and provides consultation and assistance to other nations and international agencies to help them improve their disease prevention and control, environmental health, and health promotion activities. At the center of the nation's public health system, the HHS/CDC protects communities by controlling disease outbreaks; ensuring food and water are safe; preventing leading causes of death such as heart disease, cancer, stroke, and diabetes; and working globally to reduce health threats.

Mission change and growth resulting from emerging or reemerging infectious diseases, reclassification of pathogens and potential program staff growth over time are expected to drive increases in laboratory and non-laboratory staff and demand for specialized space. The implementation of the Master Plan preferred alternative is needed in order for HHS/CDC to be able to respond quickly to new or increased mission requirements and growth through additional campus construction or reconfiguration.

1.4 NEPA Process and Public Involvement

The National Environmental Policy Act (NEPA) of 1969 establishes national policy for the protection of the environment. In 1978, the Council on Environmental Quality (CEQ) issued *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 CFR § 1500-1508) to assist federal agencies in complying with the provisions of NEPA. The major objectives of NEPA are to ensure the careful consideration of environmental effects of proposed actions in the federal decision making process and to disclose the information to the public. Furthermore, NEPA procedures require federal agencies to evaluate reasonable alternatives that would avoid or minimize adverse impacts prior to making a decision and before proceeding with the action.

There are three levels of environmental review under NEPA: Categorical Exclusion (CE); Environmental Assessment (EA); and Environmental Impact Statement (EIS). Federal agencies must determine the appropriate level of NEPA review by evaluating the proposed action's potential to result in significant impacts. NEPA requires federal agencies to prepare an EIS for actions that have the potential to significantly affect the quality of the human environment. HHS/CDC determined that an EIS would be performed to appropriately analyze potential significant impacts of the proposed action. The EIS is the most comprehensive level of environmental review under NEPA. HHS/CDC serves as the lead agency under NEPA and is responsible for preparing the NEPA document and final approval of the project. The key components of the EIS process are:



Public involvement is an important aspect of the NEPA process. Public input is critical to allow public officials to make informed decisions. As identified above, there are several opportunities throughout the EIS process for the public and government agencies to be informed about the proposed action and provide input.

The NOI was published on December 17, 2012 in the Federal Register to notify the public of HHS/CDC's intent to prepare an EIS for the proposed Master Plan. The publication of the NOI initiated the scoping process. The scoping process is a procedural requirement of NEPA and serves to identify the full range of environmental issues and alternatives to be evaluated in an EIS.³ The scoping process provides an opportunity for the public and agencies to learn about the proposed action, alternatives and comment on potential environmental issues to be addressed in the EIS. The public scoping comment period began on December 17, 2012, with the publication of the NOI and continued through February 1, 2013. A scoping meeting was held on January 17, 2013 at the Roybal Campus. The public and agencies were notified of the scoping period and scoping meeting through publications in the Federal Register, advertisements in local newspapers and websites, and mailings. Refer to Appendix A for a copy of the NOI and a detailed summary of the scoping activities and comments received during the scoping period. The following is a summary of issues identified during the scoping meeting and comment period:

³ CEQ NEPA Regulations, 40 CFR. § 1501.7.

- The impacts of increased traffic on Clifton Road and surrounding neighborhoods.
- Need for alternative transportation options to alleviate traffic congestion.
- Visual impacts of new buildings.
- Diesel emissions during construction.
- Effects of development on green space, stormwater, and floodplains.
- Effects of development on tree cover.
- Resource conservation and pollution prevention should be incorporated in design and operation.
- Effects of operation and construction on noise.

During the DEIS preparation, HHS/CDC also met and/or consulted with numerous agencies, adjacent institutional land owners and organizations to provide information of the proposed undertaking, identify potential issues and solicit information related to the preparation of the DEIS. The following agencies were consulted during the preparation of the DEIS:

- DeKalb County Commissioners Office- District 2
- DeKalb County Transportation Division
- DeKalb County Department of Public Health
- Clifton Corridor Transportation Management Association (CCTMA)
- Emory University
- Emory Healthcare
- Children's Healthcare of Atlanta at Egleston
- Veterans Affairs Medical Center (VA)
- Marcus Autism Center
- Benjamin Franklin Academy
- Emory Conference Center Hotel
- MARTA
- Georgia Regional Transportation Association (GRTA)
- Georgia Department of Transportation (GDOT)
- Atlanta Regional Commission (ARC)
- Georgia Department of Natural Resources (GDNR)
- GDNR, Historic Preservation Division

The publication of this DEIS will initiate a 45-day public comment period. HHS/CDC will conduct public meetings to solicit comments on the DEIS. Comments received during the 45-day comment period and public meetings will be reviewed and incorporated into the FEIS, as appropriate. A ROD will be issued no less than 30 days after the FEIS is published.

1.5 Scope of DEIS

The DEIS evaluates the potential impacts resulting from the Proposed Action and the No Action Alternative on the natural and built environment within the project Study Area. Potential direct, indirect and cumulative impacts of each alternative are evaluated on the following resource categories:

socioeconomics, land use, zoning, public policy, community facilities, transportation, air quality, noise, cultural resources, urban design and visual resources, natural resources, utilities, waste, and greenhouse gases and sustainability. The DEIS includes a discussion of measures to mitigate potential adverse impacts. The general Study Area for the assessment of impacts consists of the 46.7 acre Roybal Campus and a 1-mile boundary surrounding the campus (Refer to Figure 1-2: Project Location and Study Area). For some resource categories the Study Area was expanded beyond the 1-mile boundary to include the full extent of potential impacts. The 1-mile Study Area was chosen to ensure that potential impacts to the surrounding community are fully considered. This DEIS includes the following sections:

- Section 1 describes the background, purpose and need for the proposed action, the NEPA and public involvement process and the scope of the DEIS.
- Section 2 presents the Proposed Action, project alternatives and provides a summary of the alternative evaluation process.
- Section 3 describes the affected and environmental consequences of the Proposed Action and the No Action Alternative. Mitigation measures are identified.
- Section 4 provides a summary of impacts and mitigation measures.
- Section 5 provides a list of individuals who prepared the document.
- Section 6 provides the distribution list for the DEIS.
- Section 7 provides a list of acronyms.
- Appendices provide supporting data.

2 Alternatives

In accordance with NEPA, federal agencies are required to evaluate a range of reasonable alternatives and provide a discussion of why these alternatives were eliminated from detailed study.⁴ A range of conceptual alternatives were developed during the master planning process, and are described in this chapter. The development of the Master Plan was a collaborative and interactive process used to gather data and make informed decisions about the future development of the Roybal Campus. Initial goal setting and data gathering sessions were held and campus planning parameters and user concerns were identified. Data analyses were conducted to assess existing conditions and ongoing projects, in order to determine the basis for planning. Guiding principles for future growth were developed, and used in conjunction with analysis of existing space utilization and campus capacity, and served as the framework for developing the conceptual alternatives. A total of eight Master Plan conceptual alternatives were evaluated and are listed below:

- (1) No Action
- (2) Increase Space Efficiency
- (3a) Lab-Office Mix Moderate
- (3b) Lab-Office Full-Build
- (4) Office Focus
- (5a) Lab Focus Moderate
- (5b) Lab Focus Full-Build
- (6) Relocation

These alternatives provided development scenarios that varied from little to no new growth to almost a 40 percent growth in campus population. Under each alternative, the potential growth of the campus population was paramount as it helped to inform space requirements by employee type, the need for new buildings to support staff growth and overall parking demand. The maximum development was represented by Alternative 3b Lab Office Full-Build, which proposed the construction of a new laboratory building and a new office building for a total of approximately 873,364 gross square feet (gsf) and a new campus population of approximately 8,889. Table 2-1 details the new population growth, number of new buildings, total gsf and total parking supply for each Master Plan conceptual alternative.

Table 2-1: Master Plan Conceptual Alternatives

	(1) No Action	(2) Increase Space Efficiency	(3a) Lab- Office Mix Moderate	(3b) Lab- Office Full- Build	(4) Office Focus	(5a)* Lab Focus Moderate	(5b) Lab Focus Full-Build	(6B) Relocation
New Campus Population	6,173	6,323	6,793	8,889	8,419	6,793	7,263	7,144
# of New Buildings	0	0	1 Lab	1 Lab 1 Office	2 Office	1 Lab	2 Lab	0
Total GSF of New Buildings	0	0	403,980	873,364	469,384	403,980	807,960	0
Total Parking Supply	3,300	4,707	4,560	4,493	4,493	4,500	4,493	4,707
*Master Plan Preferred Alternative								

⁴ 40 CFR § 1502.14

An extensive screening process was undertaken to evaluate the suitability of each alternative to best meet the Master Plan goals and objectives. The screening process required coordination between the master planning process and the EIS development process. Evaluation criteria were developed in order to evaluate each development alternative against the same set of parameters. Table 2-2 identifies the evaluation criteria used to screen out alternatives from further evaluation in the DEIS. The evaluation criteria considered both HHS/CDC mission needs and environmental considerations. Strategic criteria included the ability to increase HHS/CDC mission readiness as well as operational requirements. Environmental considerations were a main component of the evaluation criteria. Environmental criteria considered during this process included the examination of regional and local planning policy, utility demand, air quality, commute time, transportation system capacity and greenhouse gas effects. The ability to mitigate any potential impacts was also considered. A detailed screening assessment was undertaken to understand the implications of the development alternatives on the local transportation network.

Of the eight alternatives, two alternatives were deemed viable to be carried forward in the DEIS for detailed analysis. These include Alternative 1. No Action and Alternative 5a. Lab Focus Moderate, heretofore referred to as the “Preferred Alternative”. Alternative 5a. Lab Focus Moderate was chosen as the preferred alternative in the Master Plan. The remaining six alternatives were eliminated, as they either did not ultimately meet the future needs of the HHS/CDC in advancing their mission goals, were not capable of accommodating future background growth or would have introduced a new campus population density that would have resulted in adverse impacts on the local transportation network. Alternative 5a. Lab Focus Moderate represented a moderate growth of campus population and moderate on-site expansion. Drivers that led to the selection of the Preferred Alternative included the fact that this alternative did not require: the planned relocation of existing programs; new real property acquisition; or new office building construction. This alternative supports HHS/CDC’s mission goals and accommodates agency program requirements for the current 2015-2025 planning horizon. As HHS/CDC’s mission continues to evolve, program directives may be refined which may in turn necessitate reconsideration of campus growth.

Table 2-2: Evaluation Criteria*

MASTER PLAN ALTERNATIVES		1	2	3A	3B	4	5A	5B	6B
CRITERIA	DESCRIPTION	No Action	Increase Space Efficiency	Lab-Office Mix Moderate	Lab-Office Mix Full-Build	Office Focus	Lab Focus Moderate	Lab Focus Full-Build	Relocation Alternative
STRATEGIC CRITERIA									
What is the potential cost avoidance for the alternative	(i.e., net operating lease cost reduction, O&M reduction, etc.)?	0	0	0	0	0	0	0	0
To what extent does the alternative sustain or increase mission readiness?	Labs, Lab Support and Infrastructure Availability	0	0	0	0	0	0	0	0
	Total RAW Score	0	0	0	0	0	0	0	0
	Total Weighted Score (1.0 out of 1.0)	0	0	0	0	0	0	0	0
CUSTOMER OBJECTIVES									
Physical consolidation of CIO onto Roybal Campus	Yes or No by CIO	8	8	8	1	1	8	8	4
Proximity to the EOC	Per the Roybal Adjacency Survey	0	0	0	0	0	0	0	0
Proximity to GCC and Conferencing Functions	By CIO	0	0	0	0	0	0	0	0
Proximity to Biological Laboratories	Yes or No by CIO	0	0	0	0	0	0	0	0
	Total RAW Score	8	8	8	1	1	8	8	4
	Total Weighted Score (1.0 out of 1.0)	8	8	8	1	1	8	0	4
TECHNICAL / ENVIRONMENTAL CRITERIA									
Regional and local integrated planning	Is the alternative reasonably compatible with Local Zoning /Land Use Codes?	1	2	5	8	6	4	7	3
Utility Demand	Does the alternative exceed the planned capacity for any utility system?								
	Electrical Impact_Cooled Water	1	1	2	3	3	2	4	1
	Electrical Impact_S team	2	2	1	1	1	1	3	2
	Mechanical Impact_Cooled Water	1	1	2	4	3	2	5	1
	Mechanical Impact_S team	1	1	2	4	3	2	5	1
Air Quality	Use of applicable local, state and federal standards to be considered for cumulative impacts (under development)	1	2	4	8	6	5	7	3
Greenhouse Gases	Energy and waste reduction. New renewable sources on the campus. Can reduced transmission losses. The more energy demand created is a negative for greenhouse gases, more SF potential for PV can help reduce.	1	2	3	7	6	3	5	4
Mitigation Measures	Ability of CDC to implement reasonable mitigation measures	0	0	0	0	0	0	0	0
Additional Commute Time	Ability to minimize additional commute trip delay time (total travel time)	1	7	5.5	4	3	6	2	8
Transportation System Capacity /LOS	Impacts on roadway/Intersection operational conditions	1	7	5.5	4	3	6	2	8
Ability to maintain current parking ratio	Does the alternative allow and/or require CDC to shift modes? Alternative impact of required mode shift by degrees.	0	0	0	0	0	0	0	0
	Total RAW Score	10	25	19	43	34	30	40	31
	Total Weighted Score (1.0 out of 1.0)	10	25	19	43	34	30	40	31

*Table has not been finalized and may be revised after DEIS comment period.

2.1 Preferred Alternative

The Preferred Alternative, referenced as Lab Focus Moderate conceptual alternative in the Master Plan process, includes new laboratory construction, building renovation, parking expansion, and additional improvements to campus infrastructure (Refer to Figure 2.1-1: Preferred Alternative). Implementation of the Preferred Alternative would increase the employee population by approximately 1,485 new occupants, from the current total of 5,308 to 6,793 in 2025. The Preferred Alternative physical recommendations took into consideration federal regulations in which the HHS/CDC must be compliant and address areas of safety, security, sustainability, infrastructure reliability, aesthetic continuity, cost effectiveness/best value, productivity, accessibility, health, wellness and other important components. The various improvements associated with the Preferred Alternative are described below:

New Laboratory Construction. The HHS/CDC is proposing to construct a new laboratory building measuring approximately 350,000 to 450,000 gsf which would include approximately 60,000 gsf of

below grade space. The actual size and height of the new laboratory would be determined through a Project Development Study (PDS), and could include Biosafety Level (BSL) 2, 3, and 4 laboratory space, vivarium, imaging labs, support for environmental microbiology, support for Advanced Molecular Detection (AMD), or similar. The new laboratory would be constructed on an existing surface parking lot located in the eastern portion of the campus (Refer to Figure 2.1-1: Preferred Alternative). Construction of the new laboratory on existing surface parking would eliminate approximately 150 existing surface parking spaces.

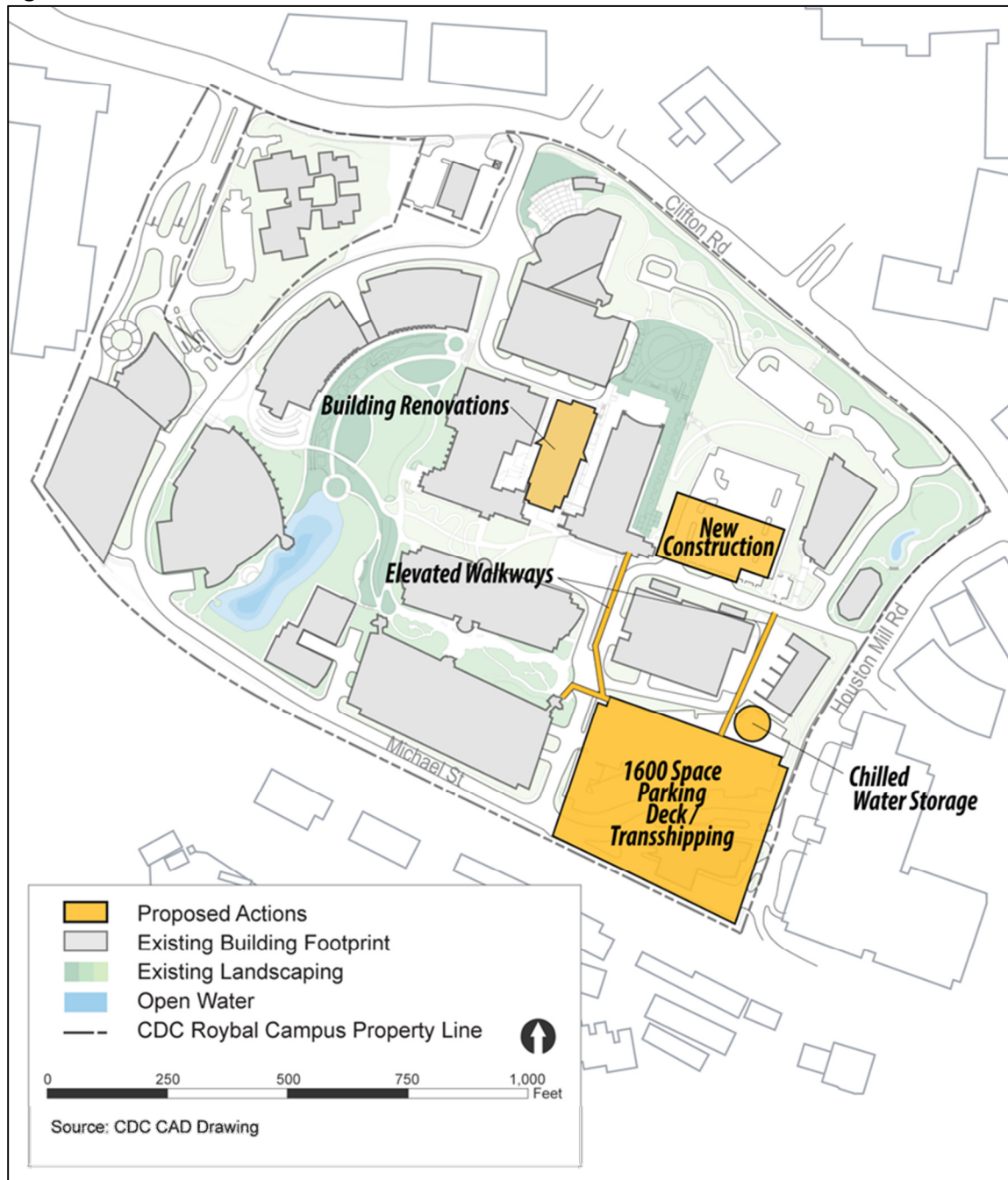
New Parking Deck Construction and Reorganization of the Transshipping Facility. A new 1,600 space parking deck is proposed as part of the Preferred Alternative. The new parking deck would be constructed in the southeastern portion of the campus, which currently consists of a surface parking lot and an existing transshipping facility. The existing transshipping facility serves as the logistics center for all deliveries to the campus. The transshipping facility and parking deck would be reorganized to allow for optimum campus and deck access and deck configuration, while also accommodating infrastructure improvements and other support services, including a new chilled water storage unit, stormwater detention, and special vehicle parking. The southeastern campus entrance would be reconfigured to improve the efficiency of vehicle and pedestrian entry. Construction of the new parking deck, along with the new laboratory would eliminate existing surface parking spaces and result in a net increase of approximately 1,200 parking spaces. The existing campus parking cap set by the 1996 Roybal Campus EIS would increase from 3,300 total spaces to approximately 4,500 total spaces.

Building Renovation. An existing laboratory on campus would undergo major renovation in accordance with the HHS/CDC Building 15 Modernization Master Plan (January 2013).

Infrastructure Upgrades. As part of the new parking deck construction and transshipping reorganization, a new chilled water storage unit would be constructed in order to meet water usage reduction, energy reduction and efficiency objectives. The new chilled water storage unit would be constructed just north of the parking deck. Additional infrastructure improvements also would include construction of stormwater detention under the new parking deck, new landscaping and formal outdoor plaza space, as well as new elevated pedestrian walkways connecting the parking deck to the new laboratory and adjacent laboratory.

2.2 No Action Alternative

CEQ regulations, identified in Section 1502.14(d), require that the evaluation of alternatives in the DEIS include the “alternative of the no action”. The No Action Alternative serves as a baseline, which allows decision makers to compare the environmental consequences of continuing to operate under current conditions against the consequences of the build condition. The No Action Alternative represents continued operation of the existing facilities at the Roybal Campus without any new construction or any major renovations of interiors or building additions over the ten-year planning period from 2015 to 2025 (Refer to Figure 2.3-1: No Action Alternative). Under the No Action Alternative, the Roybal Campus would experience employment growth of approximately 865 new occupants, with a projected population of 6,173 by 2025. This growth would be accommodated within the existing office, laboratory and support space. There would be no construction of additional parking under the No Action Alternative. The existing campus parking cap of 3,300 space set by the 1996 Roybal Campus EIS would remain in place. The No Action Alternative assumes that reasonably foreseeable development and growth would continue to occur outside the campus between 2015 and 2025.

Figure 2.2-1: Preferred Alternative

2.3 Alternatives Considered But Eliminated from Detailed Analysis

The following conceptual alternatives were considered under the Master Plan but eliminated based on evaluation of screening criteria (Refer to Figure 2.3-2: Master Plan Conceptual Alternatives Eliminated and Table 2-1: Master Plan Conceptual Alternatives. These alternatives failed to meet the future needs of the HHS/CDC in advancing their mission.

Alternative 2: Increase Space Efficiency. The “Increase Space Efficiency” alternative assumes there would be no new construction of program office or laboratory buildings, while a 1,600 space parking deck would be built within the 2025 planning horizon to accommodate the future growth in staff. Renovations of existing office and laboratory space would result in a capacity increase of 150 occupants. The total campus population under this scenario is projected to reach 6,323. This alternative would result in a net increase of approximately 1,407 parking spaces.

Alternative 3A: Lab-Office Mix Moderate. The “Lab-Office Mix Moderate” alternative assumes the construction of a new laboratory building containing approximately 403,980 gsf, housing approximately 470 occupants. Approximately 60,000 gsf of below grade specialized space would accompany the lab building. An additional building pad to the north is preserved for a future office or laboratory building. Renovations of existing office and laboratory space would result in a capacity increase of 150 occupants. A 1,600 space parking deck would be built within the 2025 planning horizon to accommodate growth. The total campus population under this scenario is projected to reach 6,793. This alternative would result in a net increase of approximately 1,260 parking spaces.

Alternative 3B: Lab-Office Mix Full-Build. The “Lab-Office Mix Full-Build” alternative assumes the construction of a new laboratory building containing approximately 403,980 gsf, housing approximately 470 occupants. Approximately 60,000 gsf of below grade specialized space is accounted for in the lab building. In addition to the new laboratory, a new office building containing approximately 469,384 gsf would be constructed, housing approximately 2,106 occupants. Renovations of existing office and laboratory space would result in a capacity increase of 150 occupants. A 1,600 space parking deck would be built within the 2025 planning horizon to accommodate growth. This alternative represents the most intensive development alternative within the series, and essentially maximizes the development potential of the remaining available land on campus. The total campus population under this scenario is projected to reach 8,889. This alternative would result in a net increase of approximately 1,193 parking spaces.

Alternative 4: Office Focus. The “Office Focus” alternative assumes the construction of two new office buildings totaling approximately 469,384 gsf, housing a total of 2,106 occupants. Renovation of existing office and laboratory space would result in a capacity increase of 150 occupants. A 1,600 space parking deck would be built within the 2025 planning horizon to accommodate growth. The total campus duty station population under this scenario is projected to reach 8,419. This alternative would result in a net increase of approximately 1,260 spaces.

Figure 2.3-1: No Action Alternative

Figure 2.3-2: Master Plan Conceptual Alternatives Eliminated

Alternative 2: Increase Space Efficiency



Alternative 4: Office Focus

Alternative 3a: Lab-Office Mix
Moderate

Alternative 5B: Lab Focus Full-Build



Alternative 3b: Lab-Office Full Build



Alternative 6: Relocation Alternative

Alternative 5B: Lab Focus Full-Build. The “Lab Focus Full-Build” alternative assumes the construction of two new laboratory buildings containing approximately 403,980 gsf each, housing approximately 470 occupants each. Approximately 120,000 gsf of below grade specialized space is accounted for in the laboratory buildings gsf total. Renovation of existing office and laboratory space would result in a capacity increase of 150 occupants. A 1,600 space parking deck would be built within the 2025 planning horizon to accommodate growth. The total campus population under this scenario is projected to reach 7,263. This alternative would result in a net increase of approximately 1,193 spaces.

Alternative 6B: Relocation Alternative. The “Relocation” alternative assumes the relocation of approximately 1,010 office stations to the Chamblee Campus, located at 4770 Buford Highway, Atlanta, Georgia. The vacated Roybal Campus office space would be backfilled with approximately 1,832 duty stations from leased space in the Atlanta metropolitan area in order to consolidate the National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention (NCHHSTP) and Center for Global Health (CGH) organizations on the Roybal Campus. This move would improve synergy among the laboratory and office functions within these organizations, which would be collocated on the Roybal Campus. Retrofitting of existing office and laboratory space would result in a capacity increase of 150 occupants. The total campus duty station population under this scenario is projected to reach 7,144. This alternative would result in a net increase of approximately 1,407 parking spaces.

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3 Affected Environment & Environmental Consequences

This section describes the environmental and social resources within the Study Area and the potential impacts resulting from the No Action and Preferred Alternative on these resources. The baseline conditions for each resource category are detailed. The potential direct, indirect and cumulative impacts of the project alternatives are then evaluated against these existing baseline conditions.

The CEQ defines direct impacts as effects which are caused by the action and occur at the same time (40 CFR § 1508.8). Indirect impacts are environmental impacts caused by the Preferred Alternative that occur later in time or farther removed in distance, but are still reasonably foreseeable. Cumulative effects, as defined by CEQ, result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Sections 3.1 through 3.13 focus on the direct impact of the alternatives. Indirect and cumulative impacts on each resource category are evaluated separately in Section 3.14. A discussion of measures to mitigate potential adverse impacts is provided, if applicable.

3.1 Socioeconomics

3.1.1 Affected Environment

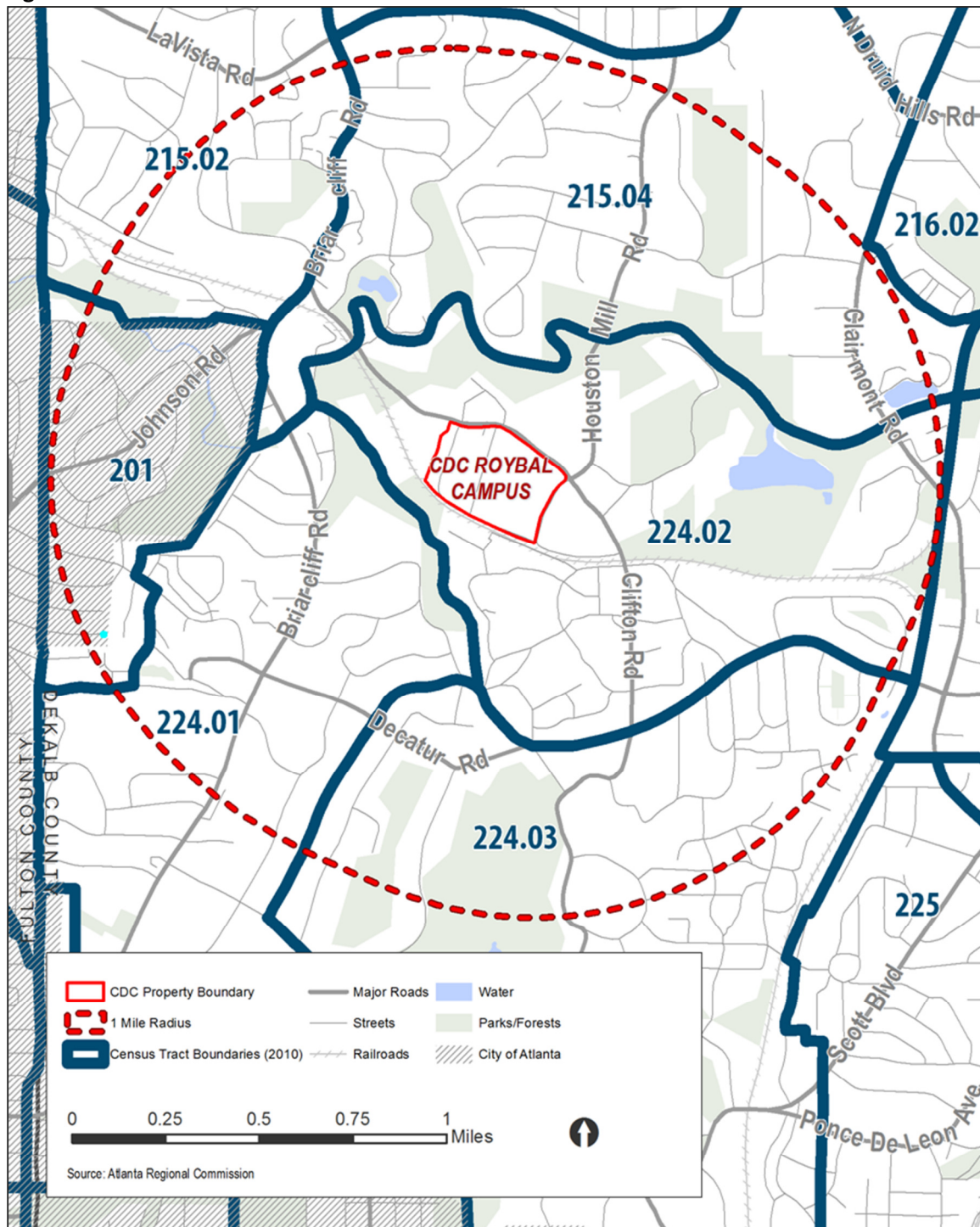
The majority of the Study Area lies within DeKalb County with a small section of the western portion extending into the City of Atlanta. The Study Area extends one-mile from the boundaries of the Roybal Campus and contains portions of census tracts 201, 215.02, 215.04, 224.01, 224.02, and 224.03 as illustrated in Figure 3.1-1: Census Tracts. All census tracts that fall within the Study Area were included in their entirety in the analysis. The Roybal Campus is located entirely within census tract 224.02. Demographic data for the Study Area was derived from U.S. Census 2000 and 2010 data, as well as ARC's PLAN 2040 population forecasts.⁵ Demographic data provided for the population within these census tracts includes population growth, households, and household size. Housing characteristics include housing growth, housing units, occupancy and ownership rates, and median housing value and monthly rent. Comparative data is provided for DeKalb County, the City of Atlanta, and the Atlanta metro region. Additionally, demographic and institutional data compiled by Emory University's Office of Institutional Research is presented below at the campus level.

Residential Characteristics

Population. The total population within the demographic Study Area as identified by the U.S. Census 2010 was 26,009 individuals, as noted in Table 3.1-1. The Study Area represents approximately 3.8 percent of the total population of DeKalb County. The population for the Study Area increased approximately 9.7 percent between 2000 and 2010. By comparison, the populations of DeKalb County and the city of Atlanta increased at a lesser rate of approximately 4 percent and 0.8

⁵ Atlanta Regional Commission's PLAN 2040 is a comprehensive, long-range plan to sustain metro Atlanta's livability through the next thirty years. PLAN 2040 addresses infrastructure, the built environment, sustainability, economic development and also includes a Regional Transportation Plan.

Figure 3.1-1: Census Tracts



percent, respectively. Significant population growth occurred within the Atlanta Metropolitan Statistical Area (MSA) in the years leading up to 2010 as illustrated by the approximately 28 percent increase in population.

Table 3.1-1: Study Area Population

	2000 Census	2010 Census	Projected Population 2025
Study Area	23,711	26,009	-
DeKalb County	665,865	691,893	856,511
City of Atlanta	416,474	420,003 ¹	621,500
Atlanta MSA	4,112,198	5,268,860	6,929,253

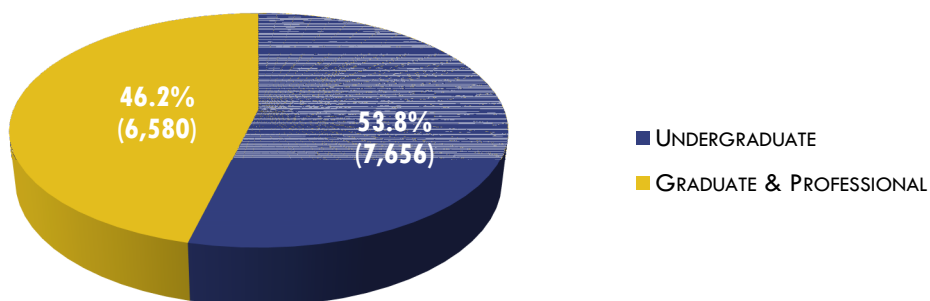
Sources: U.S. Census 2010, 2000; Atlanta Regional Commission

Notes: ¹ The City of Atlanta is currently reviewing Census 2010 data in order to determine if the City should challenge the Census Bureau's 2010 population estimate.

DeKalb County, which encompasses the Study Area, is forecasted to increase in population by approximately 23.8 percent by 2025. The Atlanta MSA is one of the fastest growing regions in the country, with a population that is anticipated to increase by approximately 31.5 percent between 2010 and 2025. Additionally, the population of the City of Atlanta is projected to increase by approximately 48 percent over the same time period. Growth in the MSA may be attributed to the rural nature of outlying counties and availability of developable land, whereas the Study Area is fairly developed and built out with little remaining vacant developable land. However, redevelopment opportunities consisting of infill development projects such as Toco Hill and Emory Point exist within the Study Area.

A large portion of the Study Area residential population is comprised of Emory University student population. As shown in Figure 3.1-2: Emory University Population, Emory University has a total enrollment of 14,236 students. Of these, approximately 7,656 (53.8 percent) were undergraduates and 6,580 (46.2 percent) were graduate/professional degree students. Almost 92 percent of the student population was classified as full-time students. In addition, 3,835 (65.8 percent) of the 5,823 residents located in census tract 224.02, which contains Emory University's Clifton and Roybal campuses, are classified as a group quarters population residing in College/University student housing in the 2010 U.S. Census.

Figure 3.1-2: Emory University Population



Income. The median household income for the Study Area was \$81,270, which is considerably higher than that of the City of Atlanta at \$45,946, DeKalb County at \$51,715 or the Atlanta MSA at \$57,783.

The median age within the Study Area is 33.3 which is similar to the city's median age and slightly younger than the MSA and county levels, as shown in Table 3.1-2.

Table 3.1-2: Median Age and Median Household Income

	Median Age	Median Household Income
Study Area	33.3	\$81,270*
DeKalb County	34.3	\$51,715
City of Atlanta	33.1	\$45,946
Atlanta MSA	34.9	\$57,783

Sources: U.S. Census Bureau; 2010 Census Summary File 1; American Community Survey 5-Year Estimates 2007-2011; *Values calculated by taking the average of the median household income of census tracts within the Study Area.

Housing Characteristics. As shown in Table 3.1-3, there were approximately 10,867 households in the Study Area with an average household size of 2.1 persons. The average household size is similar to the City of Atlanta at 2.1 but smaller than DeKalb County at 2.5 and the Atlanta MSA at 2.7.

Table 3.1-3: Household Data

	Households	Average Household Size
Study Area	10,867	2.1
DeKalb County	271,809	2.5
City of Atlanta	185,142	2.1
Atlanta MSA	1,937,225	2.7

Sources: U.S. Census Bureau; 2010 Census Summary File 1

As shown in Table 3.1-4, there were approximately 11,796 total housing units within the Study Area with an occupancy rate of approximately 92 percent. This occupancy rate was slightly higher than the countywide rate of 89.1 percent and MSA rate of almost 90 percent, and significantly higher than the citywide occupancy rate of 82 percent. Approximately 49.5 percent of the housing inventory within the Study Area is renter-occupied. Moreover, approximately 83 percent of the housing units are renter-occupied within census tract 224.02 which contains both the Roybal Campus and Emory's main campus. The significant renter-occupancy within the Study Area reflects several notable characteristics including the presence of the Emory University community, as well as area medical facilities; both of which create a demand for flexible housing options.

The median house value of \$431,183 within the Study Area was significantly higher than the median values of homes in the City of Atlanta (\$228,000) as well as DeKalb County and the Atlanta MSA (both approximately \$185,000). The median gross monthly rent for the Study Area (\$1,079) was slightly higher than the city, county and MSA rents.

Table 3.1-4: Housing Characteristics

	Total Housing Units	Occupied Units	Occupancy Rate	Owner Occupied	Median House Value*	Median Gross Monthly Rent*
Study Area	11,796	10,867	92.0%	50.5%	\$431,183	\$1,079
DeKalb County	304,968	271,809	89.1%	56.9%	\$185,100	\$952
City of Atlanta	224,573	185,142	82.4%	44.9%	\$228,000	\$910
Atlanta MSA	2,165,495	1,937,225	89.5%	66.1%	\$184,900	\$937

Sources: U.S. Census Bureau; 2010 Census Summary File 1; American Community Survey 5-Year Estimates 2007-2011

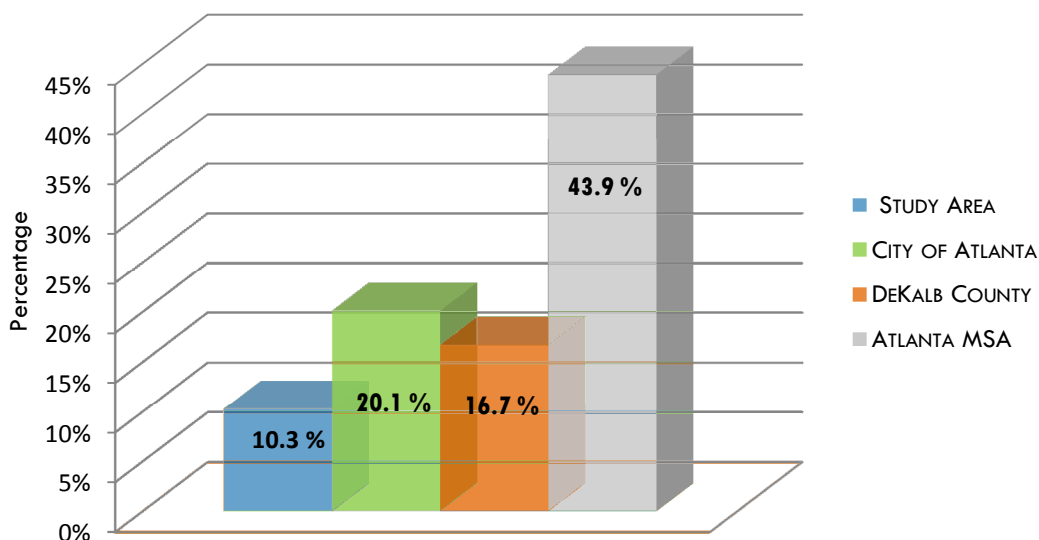
*Values calculated by taking the average of the median house/monthly rent values of census tracts within the Study Area.

The Study Area contains approximately 11,796 housing units based on U.S. Census 2010 data. While the Study Area exhibited a 10.3 percent increase in housing units between 2000 and 2010, this increase was significantly lower than the DeKalb County and Atlanta MSA increases of 16.7 percent and 43.9 percent, respectively (see Table 3.1-5: Housing Growth and Figure 3.1-3: Total Housing Units Rate of Change).

Table 3.1-5: Housing Growth

	Total Housing Units (2000)	Total Housing Units (2010)	Change (2000 to 2010)
Study Area	10,695	11,796	+ 1,101
DeKalb County	261,231	304,968	+ 43,737
City of Atlanta	186,925	224,573	+37,648
Atlanta MSA	1,504,871	2,165,495	+ 660,624

Sources: U.S. Census Bureau; 2000 and 2010 Census Summary File 1

Figure 3.1-3: Total Housing Units Rate of Change (2000 to 2010)

Environmental Justice

Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”, signed on February 11, 1994, requires that federal agencies, to the greatest extent allowed by law, administer and implement programs, policies, and activities that affect human health or the environment so as to identify and avoid “disproportionately high and adverse” effects on

minority and low-income populations. Additionally, Title VI of the Civil Rights Act of 1964 and related statutes assure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination on the basis of race, age, color, national origin, sex, disability or religion as part of any federally-funded program.

The fundamental principles related to Environmental Justice (EJ), as defined by the federal government, are as follows:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations
- To ensure the full and fair public participation by all potentially affected in the project decision-making process
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations

The following text documents the characteristics of Study Area communities relative to their minority status and income. Additionally, the text considers whether areas with high percentages of minority or low-income populations would experience disproportionately high impacts as a result of the Preferred Alternative.

Existing Minority Populations. The President's Council on Environmental Quality (CEQ) EJ Guidelines under NEPA, suggest that areas with a high concentration of minority populations may be present in areas where the minority population exceeds 50 percent or where the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population. EJ guidelines define a minority individual as African American, Asian American, American Indian and Alaskan Native, and Native Hawaiian or Other Pacific Islander and Hispanic. It is important to note that the U.S. Census Bureau defines Hispanic as an ethnic rather than racial characteristic. As such, people who identify as Hispanic may belong to any racial group.

The Study Area encompasses six census tracts (see Table 3.1-6) with a total population of approximately 26,009 in 2010. According to the data contained in Table 3.1-6, the majority of the residents in the Study Area are Caucasian (77.2 percent). The minority population of the Study Area was approximately 22.8 percent with 8.4 percent identifying themselves as African American. Approximately 10.3 percent of the population identify themselves as Asian, comprising the largest minority group across the Study Area (see Figure 3.1-4: Race Composition of Study Area Population). As seen in Table 3.1-7, the Study Area contains a significantly lower minority population when compared to DeKalb County (66.7 percent), the City of Atlanta (61.6 percent) and MSA level of 44.6 percent. In addition, of the total Study Area population approximately 4.7 percent identified themselves as Hispanic, which is lower than the county level of 9.8 percent and the MSA level of 10.4 percent.

Table 3.1-6: Race/Ethnic Composition of Residential Population

	Total Population	Caucasian	African American	Asian	American Indian and Alaska Native	Native Hawaiian and Other Pacific Islander alone	Some Other Race	Two or More Races	Hispanic ¹ (of any race)
Study Area	26,009	20,088	2,176	2,685	59	7	402	592	1,216
DeKalb County	691,893	230,156	375,725	35,426	2,479	342	31,253	16,512	67,824
City of Atlanta	420,003	161,115	226,894	13,188	988	132	9,317	8,369	21,815
Atlanta MSA	5,268,860	2,920,480	1,707,913	254,307	17,963	2,649	239,457	126,091	547,400

Source: U.S. Census Bureau; 2010 Census Summary File 1

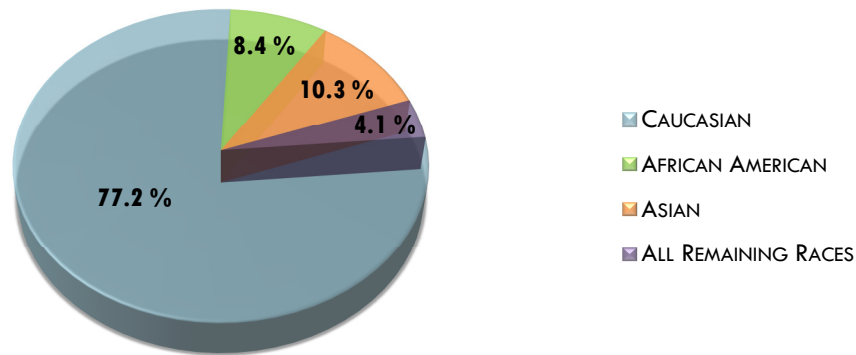
¹ The U.S. Census Bureau defines Hispanic as an ethnic rather than racial characteristic. As such, people who identify as Hispanic may belong to any racial group.**Figure 3.1-4: Race Composition of Study Area Population**

Table 3.1-7, illustrates the distribution of minority populations within the Study Area by census tract. As indicated below, none of the six census tracts that fall within the Study Area exceed CEQ's 50 percent minority population threshold. As a result the Study Area does not qualify as a minority population of concern for the purposes of the EJ analysis.

Table 3.1-7: Minority Population Comparison (Study Area)

	Census Tract 201	Census Tract 215.02	Census Tract 215.04	Census Tract 214.01	Census Tract 214.02	Census Tract 214.03
Percent Minority	12.9%	29.3%	23%	13%	36.9%	10.2%

Low-Income Populations. Low-income populations were identified using economic and statistical income/poverty data from the U.S. Census Bureau's American Community Survey. The 2013 Department of Health and Human Services (HHS) poverty threshold of \$ 23,550 for a family of four was

utilized to establish a guideline for low-income households.⁶ Low-income populations were identified by examining the percentage of families living below the U.S. Census poverty level for each census tract within the Study Area. These percentages were compared against the City of Atlanta, DeKalb County, and Atlanta MSA averages.

The percentage of families living below the poverty level within the Study Area is approximately 5.6 percent as shown in Table 3.1-8: Percentage of Families Below the Poverty Level and Figure 3.1-5: Minority and Low-Income Populations. This is markedly lower than the county and MSA percentages of 13.5 and 10.4, respectively. The Study Area poverty rate is also significantly lower than the City of Atlanta's rate of 19.5 percent. Within the Study Area, census tract 224.02, which includes Emory University and its significant student population, contains the greatest percentage of low-income populations (39 percent) and lowest median household income (\$26,458). However, the median household income of \$26,458 is still higher than the HHS poverty threshold for 2013. As a result the Study Area does not qualify as a low income population subject to an EJ analysis.

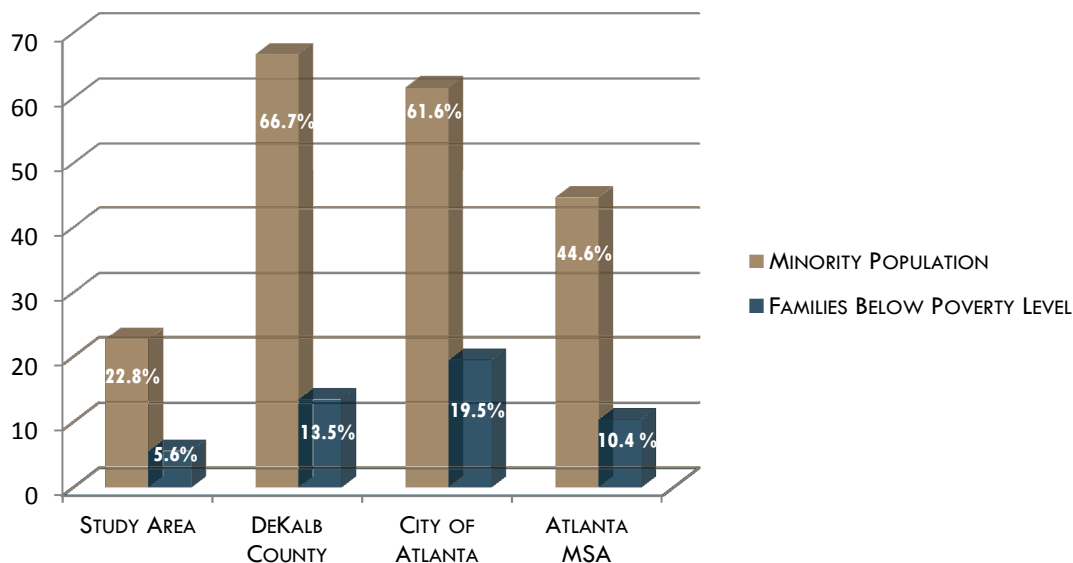
Table 3.1-8: Percentage of Families Below the Poverty Level

	Study Area	DeKalb County	City of Atlanta	Atlanta MSA
Percentage of Families Below Poverty Level	5.6%*	13.5%	19.5%	10.4%

Source: U.S. Census Bureau; American Community Survey 5-Year Estimates 2007-2011

*Value derived from average of the percentage of families and people below poverty level for Study Area census tracts.

Figure 3.1-5: Minority and Low-Income Populations

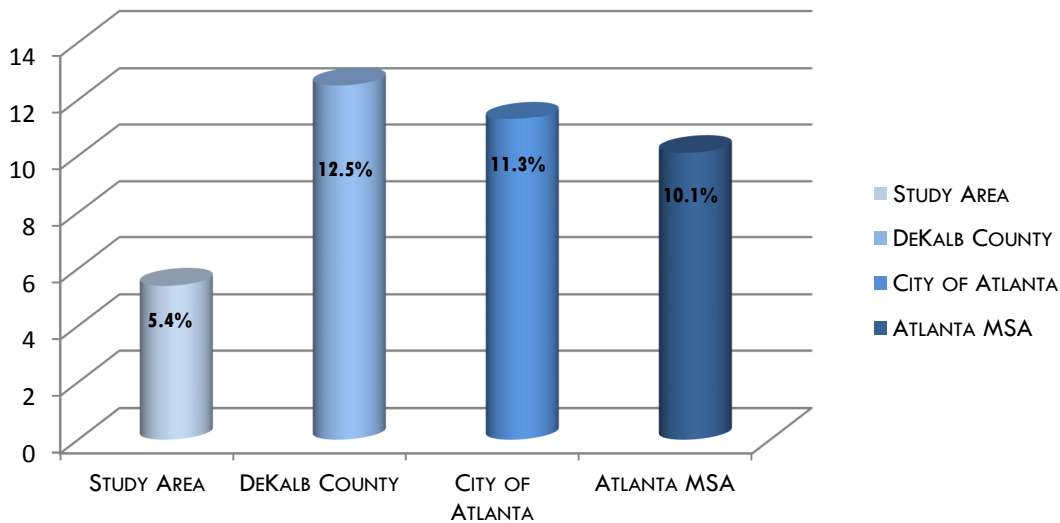


⁶ U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. *2013 Poverty Guidelines for the 48 Contiguous States and District of Columbia*. <http://aspe.hhs.gov/poverty/13poverty.cfm#guidelines> (April 30, 2013).

Economic Characteristics

Unemployment Rate. Figure 3.1-6: Unemployment Rate indicates that the Study Area experienced low unemployment with approximately 5.4 percent of its civilian labor force unemployed. This rate is significantly lower when compared with DeKalb County's rate of 12.5 percent and the Atlanta MSA rate of 10.1 percent. The average per capita income for the Study Area is \$52,708. This figure is significantly greater than the per capita income of DeKalb County at \$28,843, the City of Atlanta at \$35,884 and the Atlanta MSA rate of \$29,051.

Figure 3.1-6: Unemployment Rate



Occupation of Residents. The leading occupation of residents within the Study Area, as identified in Table 3.1-9, was management, professional and related occupations (e.g., medical and health service management, finance, physical and social sciences, education and community service) accounting for approximately 68.3 percent. This was followed by sales and office occupations (e.g., clerical and administrative support, real estate, retail sales). The management, professional and related occupations category was also the leading occupation of residents within the City of Atlanta, DeKalb County and the Atlanta region, but at a lower percentage when compared with the Study Area.

Table 3.1-9: Occupation of Residents

	Management, Professional and Related Occupations	Service Occupations	Sales and Office Occupations	Natural Resources, Construction and Maintenance	Production, Transportation and Moving Materials
Study Area	68.3%	7.9%	19.5%	2.1%	2.2%
DeKalb County	42.2%	15.5%	25.5%	7.3%	9.5%
City of Atlanta	48.6%	15.9%	23.2%	4.8%	7.5%
Atlanta MSA	38.8%	15.0%	26.7%	8.9%	10.7%

Source: U.S. Census Bureau; American Community Survey 5-Year Estimates 2007-2011

Employment in the Study Area. The Roybal Campus is located within the Clifton Corridor, which is one of the largest employment centers in DeKalb County and the Atlanta region. These establishments, predominantly categorized within the medical and health service-related fields, are generally concentrated on or in the vicinity of Clifton Road. As seen in Table 3.1-10, the largest employers within the Study Area are Emory University with an estimated 13,048 employees, followed by Emory University Hospital/Healthcare with over 8,500 employees. The HHS/CDC with approximately 5,300 employees is the third largest employer within the Study Area. CHOA Egleston and the Atlanta VA Medical Center are also significant employers within the Study Area with a staff of 2,544 and 1,650, respectively.

According to ARC's *PLAN 2040* forecasts, employment in DeKalb County is projected to increase by 23.2 percent or 67,417 jobs by 2025. Based on ARC employment data, employment within the Study Area itself is estimated to increase by approximately 11 percent between 2016 and 2025.

Table 3.1-10: Largest Employers in the Study Area

Company	Location	Type of Business	Number of Employees
Emory University	201 Dowman Dr.	Private University	13,048
Emory University Hospital/Emory Healthcare	1364 Clifton Rd. NE	Hospital/Health Services	8,541
HHS/CDC	1600 Clifton Rd. NE	Federal Government	5,308
Children's Healthcare of Atlanta Egleston	1405 Clifton Rd. NE	Hospital	2,544
Atlanta VA Medical Center	1670 Clairmont Rd.	Hospital	1,650
Wesley Woods Center	1821 Clifton Rd. NE	Health Services	854
Emory Conference Center Hotel	1615 Clifton Rd. NE	Hotel	250

Source: InfoUSA; Emory University Employees by Division January 1, 2013; Children's Healthcare of Atlanta

Commuting to Work. Table 3.1-11 indicates that 67.3 percent of the employed population within the Study Area travels to and from work via the automobile. Approximately 6.6 percent of employees travel by carpool while only 4.9 percent utilize public transportation. The entire Atlanta region relies heavily on the automobile and minimally on public transportation (3.3 percent) or other modes of commutation. In addition, mean travel time to work for DeKalb County is almost 31 minutes in length.

Table 3.1-11: Commuting to Work

	Automobile (Drove Alone)	Automobile (Carpool)	Public Transportation	Walked	Other	Work at Home
Study Area*	67.30%	6.62%	4.95%	9.83%	3.23%	8.05%
DeKalb County	72.6%	10.4%	8.3%	1.8%	2.1%	4.8%
City of Atlanta	67.3%	7.8%	11.5%	4.4%	2.2%	6.8%
Atlanta MSA	77.5%	10.7%	3.3%	1.3%	1.7%	5.5%

Source: American Community Survey 5-Year Estimates 2007-2011

*Value derived from average of the commuting to work trends for Study Area census tracts.

3.1.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, population and housing conditions would continue to change in accordance with the dynamics of existing economic and social forces in the Study Area and region. Under the No Action Alternative, staffing at the Roybal Campus is anticipated to increase by an estimated 865 employees by 2025. The introduction of this non-residential daytime population is not anticipated to adversely impact socioeconomic characteristics within the Study Area. At the local level, these employees would likely frequent local businesses spending a portion of their disposable income within the area. This spending is anticipated to result in a beneficial economic impact on nearby local businesses.

Under the No Action Alternative, no new construction, major renovations or infrastructure improvements would occur on campus. As such, there would be no influx of capital to the local and regional economy resulting from campus improvements. Construction equipment and materials would not be purchased, and construction labor would not be employed. Aside from Emory Point and outside of institutional development (Emory University, Emory Hospital, and the VA Medical Center) any additional future development within the Study Area is likely to consist of infill redevelopment and the potential development of underutilized areas. These projects are not expected to significantly alter the demographic composition or displace area businesses or local residents from their homes.

Preferred Alternative

The Master Plan improvements would not result in the displacement of local residents, businesses or employees. The Preferred Alternative would introduce approximately 1,485 jobs to the Roybal Campus. These employees would be new to the campus and would function as a new, daytime, non-residential population that would help to bolster the medical and health sciences sectors within the Clifton Corridor as well as the regional economy. Similar to the No Action Alternative, at the local level, these employees would likely frequent local businesses spending a portion of their disposable income within the area. This spending is anticipated to result in a beneficial economic impact on nearby local commercial and retail uses.

Based on employee survey data provided by the HHS/CDC, approximately 23 percent of employees presently reside within a three mile radius of the Roybal Campus. Of these, a small number of employees (approximately 3 percent) currently reside within one mile of the campus (Study Area). Based on current housing and campus demographic trends, it is assumed that a small portion of the new, future employee population may seek residence within the Study Area. This small, potential increase in residential population would not adversely affect the housing market within the Study Area as sufficient vacancy exists within the Study Area at 8 percent. Housing vacancy rates within the county and metro region, both at approximately 11 percent, would also be able to absorb future new residents. No adverse impacts to population or housing would result under the Preferred Alternative.

On a regional level, the short-term increase in employment associated with construction and construction-related activity would be expected to filter through the local economy, generating consumer and business spending. Short-term benefits to DeKalb County and the Atlanta metropolitan region would occur initially during the construction phase of the project, in the form of increased

demand for local materials, services, and labor. The specific location and level of this activity would depend upon the magnitude of expenditures and the ability of local suppliers and the local labor pool to fulfill demand for construction goods and services.

As previously stated, the implementation of the Preferred Alternative would not displace a residential population or hinder the socioeconomic conditions within the Study Area. The Preferred Alternative would not involve the displacement of any population, residences, jobs or businesses. As previously indicated the Study Area does not contain low-income or minority populations that would necessitate a full Environmental Justice analysis. The Preferred Alternative would entail improvements within a self-contained campus setting. As a result, the Master Plan improvements would not generate substantial new development that would induce changes to real estate conditions or cause harm to specific industries within the Study Area or region. The Master Plan improvements are anticipated to have a beneficial impact on both regional and local economies. As such, the Preferred Alternative would not result in a significant adverse impact to socioeconomics.

3.2 Land Use, Zoning, and Public Policy

3.2.1 Affected Environment

The following section provides a discussion of land use, zoning and public policy. Land use refers to the activity that is occurring on land and within the structures the occupy it. Types of uses include residential, retail, commercial, industrial, vacant land and open space. Typically, an analysis of land use patterns characterizes the uses and development trends in an area in addition to considering zoning regulations and public policy initiatives that may be affected by a proposed project. Zoning and other regulatory controls are also major determinants of land use. Zoning defines permitted uses, lot coverage, building density, setbacks, building heights, open space coverage and parking requirements. These designations generally help to regulate the size, and scale of buildings and also controls the type and intensity of uses of private property. The *DeKalb County Zoning Ordinance* has established zoning districts, standards and requirements used to regulate and guide development in unincorporated portions of DeKalb County, which is inclusive of the majority of the Study Area. Public policy initiatives at a regional, county, and local level as well as initiatives pertinent to the Study Area relating to development, community consistency and transportation policy are also summarized in the following section.

Land Use

The Roybal Campus is located just outside the eastern limits of the City of Atlanta in DeKalb County, Georgia. The campus is bounded by Clifton Road to the north, CSX railroad to the south, Houston Mill Road to the east and Emory University property to the west. The Roybal Campus is immediately surrounded by institutional uses to the east, west and south and a mixed-use development, hotel and residences to the north. Security fencing surrounds the entire perimeter of the campus and provides a physical separation from the surrounding land uses.

The Roybal Campus encompasses 46.7 acres and contains a mix of laboratory, office and support space in over 19 buildings, totaling approximately 3.8 million gross square feet (gsf).⁷ Approximately 43 percent of the campus consists of open space, the remaining area consists of building footprints, surface parking and internal roadways. Buildings are organized by functional zones, with the research buildings located at the campus core. Office buildings are situated in the north and northwest of the campus. Surface and structured parking surround the edges of the campus to the south and east. Support functions occupy the southwest part of campus and accommodate meeting space, public interface, and education functions, such as the Visitor Center and the Tom Harkin Global Communications and Training Facility. One of the two campuses of the Clifton School, a day care center for HHS/CDC, Emory University and University affiliated institutions and Children's Healthcare of Atlanta employees, is located in the northeastern portion of the campus.

Land uses immediately to the north of the campus include Emory Point, a mixed-use development which includes residential and retail uses, Emory Inn and Emory Hotel Conference Center, the Benjamin Franklin Academy, an office building and Clifton Heights townhouses. The Roybal Campus is surrounded by Emory University property to the west, south and east. The CSX railroad right-of-way is located

⁷ CDC.CDC Roybal Campus 2025 Master Plan.

adjacent to the southern boundary of the Roybal Campus. Further south of the right-of-way are Emory University uses including utility and support buildings, campus residences and academic buildings. Emory University administrative buildings are located immediately to the west of the Roybal Campus.

Figure 3.2-1: Land Use identifies the existing land use categories in the Study Area. Low-to-medium density residences are the largest land use in the Study Area comprising approximately 40 percent of the total. Low-to-medium density residential areas are generally found in the northern and southern portions of the Study Area and consist primarily of single-family homes located in well-established neighborhoods. These neighborhoods developed in close proximity to Emory University and other major institutions and have historically served the housing needs of staff, faculty and students.

The Study Area also includes some areas of higher-density and multi-family residential units, comprising approximately 12 percent of the Study Area and concentrated primarily in the western portion of the Study Area and off of Briarcliff Road. A concentration of apartment complexes are also located in the eastern portion of the Study Area along the east side of Clairmont Road, between North Druid Hills Road and Desmond Drive.

Institutions are the second most prevalent land use in the Study Area, comprising approximately 22 percent of the total Study Area. Institutional land uses include public uses facilities such as hospitals, schools, universities, police and fire station, government buildings and day care centers. Institutional land uses are primarily concentrated within the center of the Study Area, adjacent to and surrounding the Roybal Campus. These institutions are focused on education, health care and research and include Emory University, Emory University Hospital, Emory Clinic, the Center for Rehabilitation Medicine, Children's Healthcare of Atlanta at Egleston, Marcus Autism Center, Wesley Woods Center, Benjamin Franklin Academy, Druid Hills High School and the Veterans Affairs Medical Center.

Emory University is the largest landholder within the Study Area. According to the Emory University Campus Master Plan 2005 update, the university property totals 703 acres within the Study Area.⁸ The Emory University campus features a mix of academic, research, residential, healthcare and athletic uses. Emory affiliated institutions including Emory University Hospital and the Wesley Woods Center are located on the Emory University campus property.

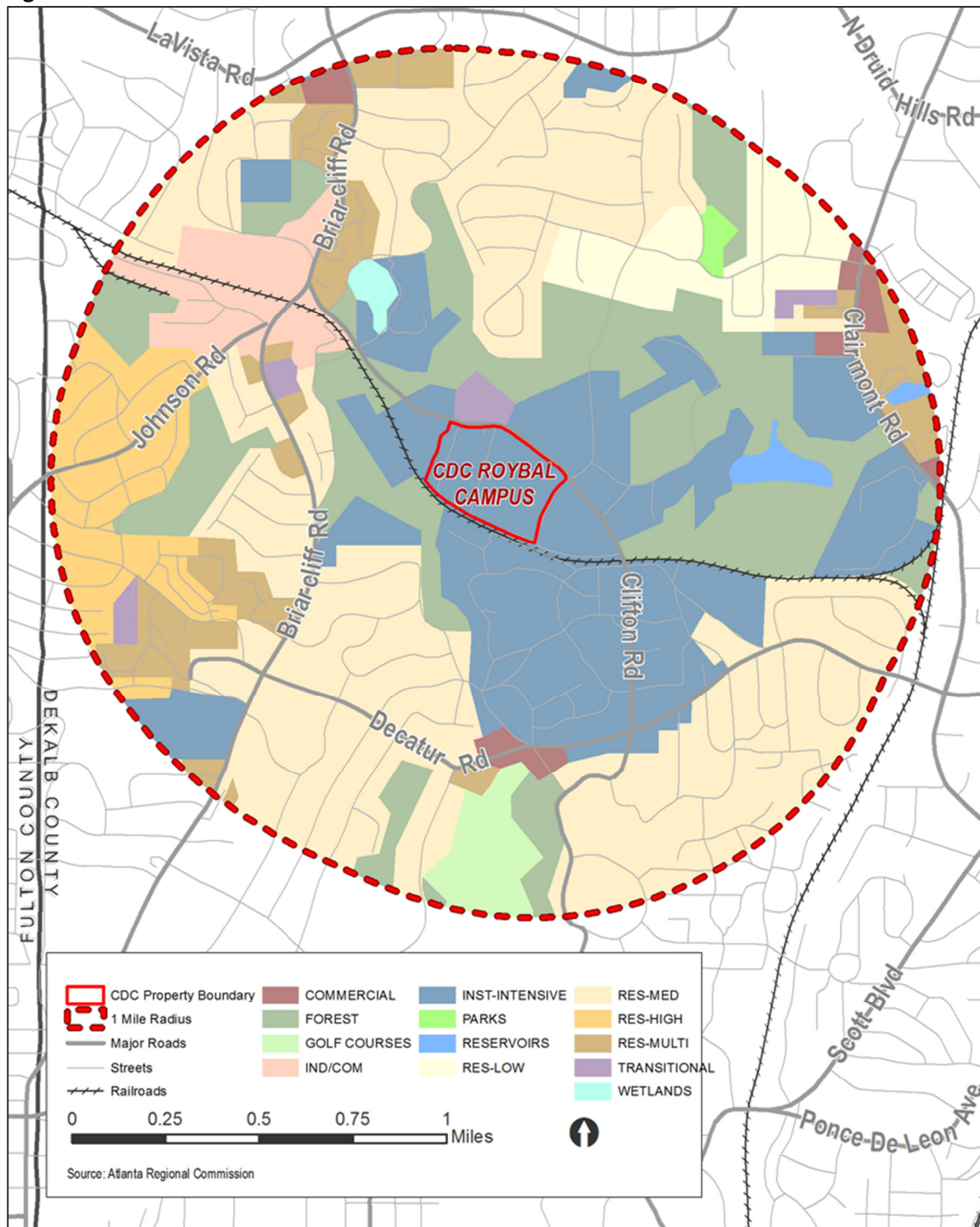
Open space is the third most prevalent land use in the Study Area comprising approximately 20 percent of the total Study Area. Open space in the Study Area includes undeveloped forest land, parks, the Druid Hills Golf Course, reservoirs and wetlands. A significant portion of open space in the Study Area is located on Emory University property. Approximately 338 acres or 48 percent of Emory University property is designated as preserved land or restricted to development.⁹

Commercial land uses account for approximately 1.4 percent of the total Study Area. These commercial uses are concentrated along the major arterials and major intersection within the Study Area: Briarcliff Road, Clifton Road, Clairmont Road and North Decatur Road. Commercial uses located near the intersection of Briarcliff Road and Clifton Road includes the Sage Hill Shopping Center and the Zonolite Road business district. Sage Hill Shopping Center is a strip shopping comprising a mix of commercial uses including a grocery store, drug store, hair salon, restaurants, medical offices and a bank. Emory

⁸ Emory University. *Campus Master Plan 2005 Update*. p.11.

⁹ Ibid.

Figure 3.2-1: Land Use



Point is a mixed-use development located across the street from the HHS/CDC Campus and is identified as a transitional land use on Figure 3.2-1: Land Use. Emory Village, another commercial activity center, is located at the intersection of Decatur Road and Oxford Road. Emory Village includes a mix of commercial establishments including restaurants, shops, a bank and gas station. Additional commercial land uses, primarily consisting of strip shopping centers are located just outside the 1-mile Study Area found at the intersections of LaVista Road and Briarcliff Road, Clairmont Road and North Druid Hills and North Decatur Road and Clairmont Road.

Development Trends

Past Development. Several large development projects have been completed in the Study Area in recent years, primarily concentrated within the core of the Study Area and undertaken by institutional land holders or located on institutionally owned property. Emory University and CDC both updated their Campus Master Plans in 2005 and have undertaken extensive development over the past 15 to 20 years. The plans identified projects and provided guidance on future construction on the campuses.

In 2005, the *Emory University Campus Master Plan 1998* was updated to provide guidance for campus development over a ten year timeframe. The *2005 Campus Master Plan Update* provided a long-term plan for the physical framework of the campus with an estimated additional 3.5 million gsf of capacity on top of the remaining 1.2 million gsf identified in the *1998 Campus Plan*.¹⁰ Since 2005 the following construction projects have been completed on the Emory University Campus: Goizueta Business School Expansion, School of Medicine Administration and Education Building, Candler School of Theology and Ethics Center, Psychology and Interdisciplinary Studies Building, the Claudia Nance Rollins Building, Freshman Housing Complex and Health Sciences Research Building.¹¹

The Roybal Campus has experienced significant physical growth, personnel growth, redevelopment and densification over the last decade. Growth and mission readiness presented a pressing need to replace, expand and/or modernize antiquated, overcrowded and technologically inferior 1950's era facilities. In the late 1990's, the Roybal Campus virtually doubled in size when 19.1 acres of land west of Michael Street was acquired to accommodate campus expansion and provide adequate security setback requirements. Following the expansion of the campus acreage, major projects included construction of four laboratory buildings, three office buildings, and major utility infrastructure and security upgrades. In addition a new building containing public health informatics, training and conference was constructed. Prior to 2000 the Roybal Campus was an estimated 1.9 million gsf. By 2012, the gsf of the campus increased to 3.8 million.¹²

Current Development. Under the State of Georgia Planning Act, large-scale development projects that are likely to have regional effects beyond local government's jurisdiction are subject to review as Developments of Regional Impact (DRI). The Clifton Road Mixed Use Development DRI (2007) and the Emory HealthCare Druid Hills Expansion DRI (2008) were approved within the Study Area and are currently at various stages of development.

¹⁰ Emory University. *Campus Master Plan 2005 Update*. p.6.

¹¹ Emory University. 2005-2010 The Next Five Years: Capital Projects Since 1998 Campus Plan. http://www.fm.emory.edu/campusplan/campusplan05_10.html (Accessed on January 31, 2012).

¹² CDC. *CDC Roybal Campus 2025 Master Plan*. p.2-6.

The Clifton Road Mixed Use Development currently known as Emory Point, is a three phased, mixed-used development project located on approximately 50 acres along Clifton Road, directly across the street from the Roybal Campus. The original plan proposed a total of 872 residential units, 121,000 gsf of retail space, 223,000 gsf of hotel space, and a total of 2,690 parking spaces.¹³ Construction of Phase I of the project was completed in 2012 and included 80,000 gsf of retail space and 443 apartments. Construction of Phase II is anticipated to commence in summer of 2013 with completion expected by winter of 2014. Phase II components are expected to include approximately 43,000 gsf of retail space, a 600 space parking deck, and 300 residential apartment units.¹⁴ Final build out of Phase III is subject to change based on market conditions, however Phase III is zoned for development of 200 additional apartments, approximately 300 parking spaces and minimal additional retail space.¹⁵

The Emory Healthcare Druids Hills Expansion DRI which was approved in 2008, proposed the construction of 395,000 gsf of clinic space and 525,000 gsf (250 beds) of hospital space on approximately 19 acres along Clifton Road across the street from the existing Emory University Hospital.¹⁶ The proposed expansion also included 1,400 new parking spaces for the hospital and clinic. In addition, 1,200 parking spaces would be added to the existing parking deck at Clairmont Campus. Currently the proposed expansion involves a new nine-story, 210-bed hospital addition on the corner of Clifton Road and Gambrell Drive. The addition would provide new operating rooms, intensive care unit rooms and private patient rooms (net gain of 128 beds for Emory University Hospital). The facility would include new underground parking for approximately 500 cars and a bridge system to connect to adjacent facilities. Construction of the Emory University Hospital expansion began in the fall of 2012 and is expected to be completed in 2017.¹⁷

In addition to Emory Point and the Emory University Hospital expansion, there are currently several projects under construction on the Emory University Campus.¹⁸ Phase II of the Candler School of Theology is scheduled for completion in 2014 and would add approximately 70,000 gsf of space to the Candler Theology Building.¹⁹ Phase V of the Freshman Housing Master Plan includes the construction of 105,000 gsf residence space to accommodate approximately 330 student beds and would be completed by May 2014. Emory University is also constructing a new 20,000 gsf addition at the Yerkes Regional Primate Center to be completed in 2013 and a 70,000 gsf, five-story addition to the existing Atwood Chemistry Center to be completed by June 2015.²⁰

Future Development. The majority of proposed future construction within the Study Area would occur on institutionally-owned land. Future development is focused on intensification of institutional land uses. Emory University has several projects under various stages of planning including an approximately 50,000 gsf addition of their Student Center, expansion of the Clairmont Campus parking deck and a

¹³ Atlanta Regional Commission. Development of Regional Impact Review Report: Clifton Road Mixed Use Development. April 28, 2007. p.1

¹⁴ Telephone Conversation with Jason Frost, Cousins Properties. March 26, 2013.

¹⁵ Ibid.

¹⁶ Atlanta Regional Commission. Development of Regional Impact Review Report: Emory Healthcare Druid Hills Expansion. September 2, 2008. p.1

¹⁷ Personal Communication with Jen Fabrick, Emory University. April 3, 2013.

¹⁸ Emory University Website: Campus Services Division of Finance and Administration Active Projects. <http://construction.emory.edu/active.cfm> (January 31, 2012)

¹⁹ Emory University Website: Campus Services Division of Finance and Administration Active Projects. <http://construction.emory.edu/planned.cfm> (January 31, 2012)

²⁰ Emory University Website: Campus Services Division of Finance and Administration Active Projects. <http://construction.emory.edu/planned.cfm> (January 31, 2012)

100,000 gsf sophomore residence facility. A new research building for Emory University School of Nursing has also been proposed.

In addition to proposed projects at Emory University, a new VA research building is proposed on the campus of the Atlanta VA Medical Center. The research building would house new dry and wet labs and clinical space. Construction is expected to be completed by 2019, pending funding approval.

Any additional future development within the Study Area is likely to be redevelopment of underutilized commercial areas. Potential redevelopment areas as identified by DeKalb County, existing LCIs and comprehensive plans are discussed below:

Emory Village. Emory Village is a historic neighborhood business district located at the intersection of North Decatur Road, Oxford Road and Dowman Drive, adjacent to Emory University and the Druid Hills neighborhood. The Emory Village LCI calls for the revitalization of the commercial center as pedestrian-oriented, mixed-use community center. Improvements to revitalize the business district have been undertaken and include traffic, street and pedestrian improvements including a new roundabout. The district was rezoned in 2007 to permit multi-story mixed-use development.

Sage Hill Shopping Center/Zonolite Business District. Sage Hill is an existing older shopping center with extensive surface parking located the intersection of Briarcliff Road and Clifton Road. Zonolite is an adjacent business district which is transitioning from industrial to commercial uses. The Sage Hill Shopping Center and the Zonolite District are underutilized commercial areas identified for redevelopment. Due to the presence of large parcels under single ownership, the Clifton Corridor Urban Design Guidelines identifies these areas as a prime location for a pedestrian-friendly, mixed-use neighborhood activity center.²¹

North Druid Hills Road Redevelopment. DeKalb County, in collaboration with the Atlanta Regional Commission (ARC) prepared the North Druids Hills Livable Centers Initiative (LCI) study to plan for the long term development of the North Druid Hills (NDH) corridor, which is a 2.5 mile stretch from Buford Highway to Clairmont Road. The southern portion of the NDH corridor extends into the EIS Study Area. This southern portion of the NDH corridor has been identified as two separate Neighborhood Center Development nodes: Toco Hill Node and Mason Mill Park Node. The Toco Hill Node is envisioned as a neighborhood center mixed-use district with a focus on redeveloping the neighborhood shopping center, improving internal circulation and incorporating a mix of uses.²² The Mason Mill Park Node is also envisioned as a neighborhood center mixed-use district which potential to be developed as a Lifelong Community Center.²³

Zoning

The Roybal Campus is exempt from the *DeKalb County Zoning Ordinance* as it is Federally-owned property. As a Federal agency, the HHS/CDC must consider local regulations to the maximum extent practicable but is not required to adhere to local zoning requirements.²⁴ As such, the HHS/CDC generally

²¹ Clifton Community Partnership. *Clifton Corridor Urban Design Guidelines*. December 2008.

²² DeKalb County and ARC. *North Druid Hills LCI*. Prepared by ARCADIS. Adopted May 24, 2011. P.157

²³ DeKalb County and ARC. *North Druid Hills LCI*. Prepared by ARCADIS. Adopted May 24, 2011. P.167

²⁴ Title 40, Chapter 12, §619(b) of the United States Code. In carrying out its federal functions, neither the United States nor its agencies are subject to state or local regulations absent a clear statutory waiver to the contrary. This concept is based upon the

adheres to local zoning requirements as a guiding principal and as a good neighbor policy. However, in some instances, in order to fit the desired program requirements on a specific site, the HHS/CDC may choose not to comply with local codes and requirements (i.e., building heights). For informational purposes, existing zoning designations for the Roybal Campus and Study Area are described below.

The Roybal Campus is designated as an Office-Institution (O-I) zoning district. As noted in the *DeKalb County Zoning Ordinance*, the O-I District is intended to provide: (1) convenient areas within DeKalb County for the location of office and institutional uses which are necessary for the residents, business and professional practitioners within the county; and (2) locations for the development of cultural, recreational, educational, and health service facilities for the county.²⁵ The O-I zoning district permits a number of uses including health and medical service facilities, research and training facilities, universities, as well as community facilities. Parking lots and parking garages are also allowable uses. Additionally, lots are required to have at least 100 feet of frontage as measured along the public street frontage and minimum lot coverage shall not exceed eighty percent. Minimum setback requirements include 50 feet from a public street and twenty feet for a side yard. As required under the Federal Interagency Security Committee (ISC) standards, the HHS/CDC maintains a 150-foot setback from major program occupied buildings. This buffer is contained within the existing campus perimeter.

The *DeKalb County Zoning Ordinance* limits building height to five stories and seventy feet within the O-I zoning district. However, the DeKalb County Board of Commissioners is empowered to review special land use permit applications for specific uses identified in Section 27-490(c) including buildings exceeding five stories in height. As previously mentioned, the local zoning ordinance is not applicable to the Roybal Campus as the property is under the jurisdiction of a federal entity.

The Study Area is predominantly located in DeKalb County with the western extent of the Study Area near Johnson Road located within the City of Atlanta. As illustrated in Figure 3.2-2: Zoning, the zoning districts within the Study Area are predominately institutional in the immediate vicinity of the Roybal Campus with residential districts throughout the north and south portions of the Study Area.

Immediately north of the Roybal Campus are Pedestrian Community (PC-3) designations with O-I zoning districts located to the east, west, and south of the campus adjacent to Emory University. Emory Point represents the first mixed used development constructed within DeKalb County's new PC-3 zoning designation.²⁶ Several residential single-family zoning classifications (R-75, R-85, and R-100) cover the northern half of the Study Area with an R-85 designation and R-75 districts located in the southern quadrant of the Study Area. A number of multi-family residential zoning districts (RM-H, RM-75, RM-85, RM-100) are generally located along Briarcliff Road. Local commercial zoning districts (C-1) are found along Clairmont Road and at the confluence of Briarcliff and Clifton Roads. An industrial zoning district (M) situated west of Briarcliff Road is segmented by the CSX right-of-way.

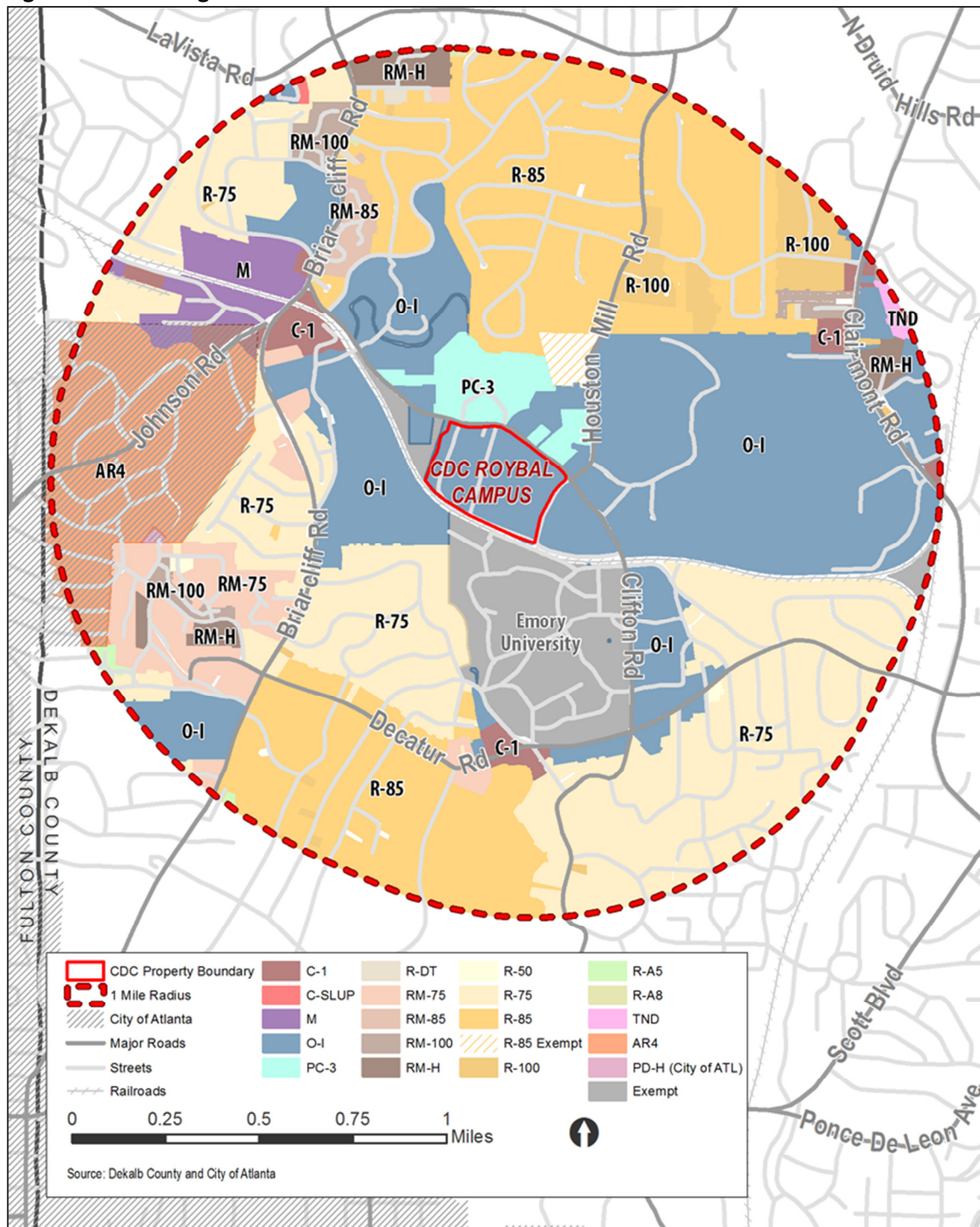
A small portion of the Study Area in the vicinity of Johnson Road extends into the City of Atlanta. This area is largely designated as a single-family residential zoning district (R-4) with a minimum lot size of approximately 0.21 acres. Other Study Area zoning districts within the City of Atlanta include a light industrial (I-1) district and a C-1 community business district. These districts are consistent with the

Supremacy Clause of the U.S. Constitution which states, in part, that it and the laws of the U.S. are the supreme law of the land. (U.S. Constitution, Article VI, cl.2.)

²⁵ Code of DeKalb County. *Chapter 27 – Zoning*. Article II District Regulations Section 27-487.

²⁶ Clifton Community Partnership. *Clifton Corridor Urban Design Guidelines*. December 2008. Prepared by Goody Clancy. p.xxv

Figure 3.2-2: Zoning



DeKalb County zoned M and C-1 districts found immediately to the north.

Public Policy

Regional Plans

Atlanta Regional Commission PLAN 2040. The Atlanta Regional Commission (ARC) functions as the regional planning and intergovernmental coordination agency for the greater Atlanta region, a ten-county area inclusive of DeKalb County as well as the City of Atlanta. ARC offers a variety of planning resources, and programming addressing crucial regional issues ranging from sustainable community initiatives to public outreach. ARC also serves as the federally-designated Metropolitan Planning Organization (MPO) for the 18-county Atlanta Region and is responsible for developing a multi-modal transportation plan that meets all federal guidelines (see Transportation Initiative for discussion of Regional Transportation Plan).²⁷

ARC's *PLAN 2040*, adopted on July 27, 2011, is a comprehensive long-range blueprint to sustain metro Atlanta's livability through the next thirty years. Objectives of this regional comprehensive plan include: Serving People, Building Community, Enhancing Mobility, Preserving the Environment and Growing the Economy. *PLAN 2040* addresses the built environment, infrastructure, economy and sustainability. Another component of this Plan is the Regional Transportation Plan (see Transportation Initiatives).

PLAN 2040 recognizes the importance of the HHS/CDC in terms of workforce and economic development. The HHS/CDC is also located in an area termed the "Innovation Crescent", a 13-country area situated between Athens and metro Atlanta. The Innovation Crescent contains a concentration of businesses and research institutions focusing on the life science industries. Industry sectors include therapeutics, diagnostics, agriculture, environmental, and research and development.²⁸

County Initiatives

DeKalb County Comprehensive Plan 2005-2025. This document provides an inventory of existing land use and development, transportation infrastructure, natural resources, and community services as well as a demographic profile of DeKalb County. This plan also provides guidance for the future development of the county focusing on quality of life issues, environmental sustainability and smart growth. The *Comprehensive Plan* is composed of the following three components:²⁹

- Community Assessment: Existing conditions and inventory of data, identification of opportunities and constraints;
- Community Participation Program: The public involvement portion of this plan identifies and involves local stakeholders in order to make sure that the plan reflects community values and desires.

²⁷ Atlanta Regional Commission. *Transportation Planning*. <http://www.atlantaregional.com/transportation/overview/> (March 5, 2013).

²⁸ Atlanta Regional Commission. *PLAN 2040 ARC Implementation Program*. p. 24. http://documents.atlantaregional.com/plan2040/docs/lu_plan2040_implementation_program_0711.pdf (March 6, 2013).

²⁹ DeKalb County Department of Planning and Development Strategic Planning Division. *DeKalb County Comprehensive Plan 2005-2025 Executive Summary*. pp. 6-7.

- **Community Agenda:** This document presents the community's vision for the future, addresses the issues and opportunities identified by the community, and describes the implementation of the *Comprehensive Plan*.

The plan notes that professional and administrative services are a major employment sector within DeKalb County and specifically references the medical and health science-related facilities on Clifton Road as an example of this type of growth. As a result, there is high demand among private health companies and laboratories to be located in the Clifton Corridor. However, the Comprehensive Plan also states that there is little available room or vacant land required for expansion (aside from density and height increases on existing parcels) within the corridor. In addition, the plan recognizes that the area is not adequately served by public transportation.

The Community Agenda component of the Comprehensive Plan identified character areas as well as locations requiring special attention throughout the county. This document also provides a guide for the county's future as it has been developed with the involvement of the public, elected official and other key community stakeholders. The CDC/Emory area has been classified by DeKalb County as a Major Employment node and the Clifton Corridor has been designated as a Town Center in order to formulate future development strategies that would result in investment and policy decisions for this area.³⁰ The Town Center is characterized as a focal point for several neighborhoods with a concentration of activities including retail, commercial, professional office, higher-density housing and open space. Applicable land uses include high density residential and high intensity commercial.

The Community Agenda includes recommendations and strategies to improve the overall quality of life in the county. A major element of this Comprehensive Plan component is visioning and public outreach. When asked about changes in their community, residents indicated their desire to improve traffic congestion on major roads.³¹ This document examines land use trends, transportation, open space, economic development, environmentally sensitive areas as well as a range of other topic areas. County residents indicated that more should be done to retain businesses in the county. Approximately 67 percent of citizens surveyed thought that economic development projects are promoted without adequate consideration of their impacts on infrastructure and natural resources. With respect to land use, 60 percent of residents surveyed that there is typically neighborhood opposition to innovative or higher density developments.³²

City of Atlanta

2011 City of Atlanta Comprehensive Development Plan. The preparation of a comprehensive plan is required for local municipalities pursuant to the Georgia Planning Act of 1989. The Comprehensive Development Plan (CDP) is the City of Atlanta's implementation of this state regulation. The CDP, adopted in October 2011, offers guidance for the future growth and development of the City. This document examines a range of planning areas including land use, demographics, economic development, cultural resources, and transportation. The CDP includes three components: Community

³⁰ DeKalb County Strategic Planning Division Department of Planning and Development. *DeKalb County Comprehensive Plan 2005-2025: Executive Summary*. pp. 35; 37-38.

³¹ DeKalb County Strategic Planning Division Department of Planning and Development. *DeKalb County Comprehensive Plan 2005-2025: Community Agenda*. Amended December 2011. p. 11.

³² DeKalb County Strategic Planning Division Department of Planning and Development. *DeKalb County Comprehensive Plan 2005-2025: Community Agenda*. Amended December 2011. p. 12.

Assessment (existing conditions); Community Participation Program (public outreach); and Community Agenda (implementation program with input from the public and stakeholders).

A portion of the Study Area is located within the northeast fringe of the City of Atlanta. This area, located within the Morningside/Lenox Park neighborhood, is referenced within the CDP as a “traditional neighborhood existing” character. Typically, these neighborhoods have been developed prior to 1960 and are primarily single-family residential homes.³³

The need to capitalize on the presence of world-class medical and research facilities including the HHS/CDC as well as health-related sectors in general is specifically referenced as an economic development strategy. Secondly, the CDP addresses the importance of strengthening the City’s reputation as an international center for global health by bringing national and international organizations to the attention of the medical/science community. The Proposed Project would support these development initiatives.³⁴

Local Plans

Clifton Corridor Urban Design Guidelines, December 2008. This initiative was developed by the Clifton Community Partnership (CCP) and Emory University in order to provide a mechanism for addressing shared “quality of life” issues and growth within the Clifton community. The CCP has engaged local civic and business leaders, local governments, as well as employers/employees and local residents to develop a shared vision for the future of the community. These guidelines identify several community issues including:³⁵

- Encouraging housing that would enable employees to live closer to their jobs thereby reducing the number of commuter vehicles on area roads.
- Providing transportation choices as an alternative to single-occupancy vehicles.
- Promoting pedestrian-friendly streetscapes and outdoor spaces
- Supporting local businesses, restaurants, and activity centers.

The intent of this document is to outline issues that are important to the community and to provide a framework to address changes to and the future development of the Clifton Community, which is defined as the area extending approximately 3 miles from Emory’s core campus.

North Druid Hills LCI. DeKalb County, in collaboration with ARC, prepared the North Druids Hills Livable Centers Initiative (LCI) study to plan for the long term development of the North Druid Hills (NDH) corridor. The study seeks to develop an integrated land use and transportation plan for residential and commercial development for the corridor. The southern portion of the LCI Study Area extends into the northeastern portion of the EIS Study Area. This portion of the LCI Study Area has been identified as two separate Neighborhood Center Development nodes: Toco Hill Node and Mason Mill Park Node. The Toco Hill Node is envisioned as a neighborhood center mixed-use district with a focus on redeveloping the neighborhood shopping center, improving internal circulation and incorporating a mix

³³ City of Atlanta Department of Planning and Community Development. *2011 Comprehensive Development Plan*. September 2011. pp. 455-56.

³⁴ City of Atlanta Department of Planning and Community Development. *2011 Comprehensive Development Plan*. September 2011. p. 527.

³⁵ Clifton Community Partnership. *Clifton Corridor Urban Design Guidelines*. December 2008. p. iv. Prepared by Goody Clancy.

of uses.³⁶ The Mason Mill node is also envisioned as a neighborhood center mixed-use district which potential to be developed as a Lifelong Community Center.³⁷ A major component of the LCI is a redevelopment plan for the Executive Park area, which is located just north of the DEIS Study Area. The redevelopment plans calls for approximately 2 million gsf of new mixed-use space including retail, office, multi-family housing townhomes, single-family homes, and a hotel.³⁸

Emory Village Revitalization Plan. This plan, commissioned by the Alliance to Improve Emory Village (AIEV), focuses on the revitalization of Emory Village which is located in northeast Atlanta at the confluence of North Decatur Road, Oxford Road, and Dowman Drive. This area, which functions as a local commercial center, has struggled to adjust to the pressures resulting from the growth of both Emory and the Druid Hills neighborhood. This plan focuses on improving pedestrian and vehicular flow through the village, the reconfiguration of on-street parking, the addition of pedestrian and streetscape amenities as well as historic preservation, and the implementation of urban design guidelines.³⁹ The *Emory Village Revitalization Plan* is consistent with AIEV's mission statement to create a safe, economically-viable, walkable and compact mixed-use community that is compatible with and a resource to Emory University and the surrounding historic neighborhoods.⁴⁰ Since the implementation of this plan, AIEV has received public improvement funds from the Atlanta Regional Commission which designated Emory Village as a "Livable Center" and from DeKalb County for traffic and streetscape improvements. In addition, a zoning overlay and design guidelines were submitted and approved by the DeKalb County Historic Preservation Commission in 2006.

City of Decatur LCI Study, June 2011. This study updates two previous LCI studies for Decatur, the Decatur Town Center and Avondale MARTA Station LCIs. In addition, this study combines the entire City of Decatur limits into a new LCI area. Decatur lies just beyond the southeastern extent of the Study Area. The Decatur LCI provides recommendations for economic development, transportation, urban design, and sustainable practices. The LCI indicates that population growth and employment is projected to increase in Decatur through 2040. Decatur faces similar challenges to the Study Area related to projected population growth and employment and quality of life. The Decatur LCI includes recommendations such as increased density, mixed-use development, as well as pedestrian and transportation improvements. The need to strengthen partnerships between the City of Decatur, CCTMA and major area employers is specifically referenced as a means to promote alternative transportation strategies.⁴¹

A New Public Realm for DeKalb County. This document presented recommendations to re-imagine the public space of a 688-acre section of an area of Briarcliff-North Druid Hills. This document called for improvements to parks, streetscapes and an expansion of open space. Recommendations included an expansion of Kittredge Park, conversion of Briarcliff and North Druid Hills Roads into tree-lined boulevards and new street types (retail street, park drive, residential street, boulevard) designed to meet the needs of various users such as motorists, pedestrians, and bicyclists.⁴² Although this plan is

³⁶ DeKalb County and ARC. *North Druid Hills LCI*. Prepared by ARCADIS. Adopted May 24, 2011. P.157

³⁷ DeKalb County and ARC. *North Druid Hills LCI*. Prepared by ARCADIS. Adopted May 24, 2011. P.167

³⁸ DeKalb County. *The Park Druid Hills Zoning and DRI Site Plan*. September 17, 2008. Prepared by Taylor and Mathis.

³⁹ Peter Drey + Company for Alliance to Improve Emory Village. *Emory Village Revitalization Plan*. September 2002. p. III-11.

⁴⁰ Alliance to Improve Emory Village. *The Coming Together of AIEV's Initial Concepts*.

<http://www.emoryvillage.org/about.htm#whoisAIEV> (January 3, 2013),

⁴¹ City of Decatur Livable Centers Initiative Study. June 2011. p. 33.

⁴² Alex Garvin & Associates. *A Public Realm for DeKalb County*. 2007. p 12.

specific to the Briarcliff-North Druid Hills area, many of the public realm principles noted within the document are transferable to other neighborhoods.

Emory University

Emory University Campus Plan, 1998. This document provides a defined blueprint for the physical development of the Emory University campus. The *Campus Plan* also addresses the realignment of campus space in order to accommodate the existing and future needs of the school. The functional needs of the campus respective to general operations, parking, traffic, and safety is also a focus of this document. General guidelines for the future development of the campus under the *Campus Plan* include the incremental infill of buildings and improved connectivity through the use of open space, paths, and quadrangles.⁴³ The *Campus Plan* introduced seven *Guiding Principles* designed to build consensus across campus interests as well as aesthetic design guidelines meant to bring a cohesive physical design to campus buildings and landscapes.⁴⁴ These concepts were further expanded upon in the *Emory University Campus Plan Update* completed in 2005 and described below.

Emory University Campus Master Plan Update, 2005. The *Campus Master Plan Update* builds upon the initiatives contained in the 1998 plan and provides guidance for campus development over a ten year timeframe. The *Update* also provides a long-term plan for the physical framework of the campus with an estimated additional 3.5 million gsf of capacity on top of the remaining 1.2 million gsf identified in the *1998 Campus Plan*.⁴⁵ The intent of the *Update* is to thoughtfully accommodate future growth in a sustainable way while retaining the university's distinctive sense of place and without infringing on neighbors or adjacent uses. Additionally, as part of the *Update*, Emory adopted a Land Use classification system to help guide the future development of University-owned property. Land use categories include: preserved land; conserved land; managed land and developable land. Water bodies, stream buffers and floodplains are considered restricted area overlays.

The reorganization of space to accommodate growth included the relocation of the hospital and other healthcare delivery systems to the east side of Clifton Road (also referenced as the Clifton Road Redevelopment Project in the *Update*), which together with the demolition of most of the old hospital building to create new space for an academic quad.⁴⁶ The plan also describes several projects including new housing, multidisciplinary science facilities, a multipurpose center and new academic and administration buildings. The document states that the university benefits from its proximity to the HHS/CDC and Children's Hospital of Atlanta (CHOA), which helps to create a concentration of medical and research uses. The *Update* also references the need to explore solutions to the growing mobility issues and other quality of life issues within the Clifton Corridor.

2012 Campus Design Guidelines. The intent of this document is to establish distinct design criteria and in a cohesive manner that respects Emory's past and addresses its current challenges in an innovative manner.⁴⁷ This document outlines strategies to unify the overall appearance of the campus through the integration of existing buildings of different eras with newer and future development. These guidelines

⁴³ Emory University. *Campus Master Plan 1988: Comprehensive Plan*.

<http://www.fm.emory.edu/PLAN/comprehensive.html> (December 27, 2012).

⁴⁴ The core themes of the *Guiding Principles* include Intellectual Community; A Walking Campus; Symbolic Centers and Edges; An Emory Based Language; Environmental Stewardship; Enlightened Frugality; and Sustainable Implementation.

⁴⁵ Emory University. *Campus Master Plan 2005 Update*. p.6.

⁴⁶ Emory University. *Campus Master Plan 2005 Update*. p.13.

⁴⁷ Emory University. *2012 Design Guidelines*. p.4.

describe the Tuscan style architecture and roof designs prevalent across campus as well as the material and landscaping palettes to be used at Emory.

Community Improvement Districts

Community Improvement Districts (CIDs) are defined geographic areas where commercial businesses/non-residential property owners pay additional fees which are used to finance improvements and services with the district. Services typically provided in CIDs range from streetscape improvements and street cleaning to marketing. Additional benefits of a CID include crime prevention, and leveraging funding for programming and helping to realize a community's potential.

Proposal for a University Triangle Community Improvement District. This proposed CID, located in DeKalb County, would span the I-85 corridor between the Fulton County and Gwinnett County lines. Areas of importance include the HHS/CDC Chamblee Campus, and several educational institutions including Oglethorpe University, Mercer University and Emory University. Goals of this proposed district include “fixing broken windows” or reducing blight, developing activity centers, and investigating the potential for an educational partnership with the HHS/CDC and other universities situated within the proposed CID. In addition, interchange improvements along I-85 as well as the preparation of a transportation plan along North Druid Hills Road are also referenced in this proposal. This proposed CID is situated well beyond the Study Area limits and is closer to the HHS/CDC Chamblee Campus.

Transportation Initiatives

DeKalb County Comprehensive Transportation Plan (CTP), Completed 2006. The CTP is a 25-year long range plan that would provide transportation choices, improved air quality, and coordinated land use in an effort to improve the quality of life of DeKalb County residents. The CTP documents existing travel conditions and projects future transportation conditions within the county. One of the goals of the CTP is to plan for the safe, reliable, timely, and efficient movement of goods, people, and services within, through, and around the county.⁴⁸ Congestion is a crucial issue for the Clifton Corridor as identified in the CTP with approximately 71 miles of roadway in the Decatur/Emory area forecasted to operate at volumes exceeding capacity by the year 2030. Within the corridor, roadways projected to experience severe congestion levels included Briarcliff Road, North Druid Hills, Road, LaVista Road, and Clairmont Road and Ponce de Leon Avenue. Near term recommendations related to the Clifton Corridor include three new MARTA bus routes to serve Clairmont Road, improved pedestrian amenities, and a roadway capacity improvement project on Briarcliff Road between Clifton Road and North Druid Hills Road. Potential long range projects relevant to the Clifton Corridor and contained in the CTP included the Atlanta-Athens Commuter Rail, Buford Highway Bus Rapid Transit (BRT) and a roadway widening project on portions of LaVista Road. Currently, the CTP is being updated with the anticipated update scheduled for 2014.

Connect Atlanta Plan. The Connect Atlanta Plan, adopted in December 2008, functions as the City of Atlanta's Comprehensive Transportation Plan (CTP). As a portion of the western quadrant of the Study Area, in vicinity of Johnson Road, lies within the City of Atlanta, the Connect Atlanta Plan steers future transportation investments in this area. The CTP is designed to address the transportation challenges associated with the resultant and projected growth within the City of Atlanta. The CTP aims to

⁴⁸ DeKalb County. *DeKalb County Comprehensive Transportation Plan Fact Sheet*. <http://www.co.dekalb.ga.us/ctp/Pdf/FactSheet.pdf> (January 3, 2013).

accommodate this population growth while maintaining the City's quality of life and providing improved mobility and safe transportation choices. The plan also promotes projects and strategies that would preserve the City's neighborhoods. The CTP noted that a large number of city streets have been designed to facilitate high vehicular speeds and that many local trips made by residents are often completed via local roadways as opposed to highways. The plan also indicated that City's pedestrian network is incomplete and does not facilitate walking. Recommendations of the study include road widening and street calming measures, improved rail and bus transit, as well as a proposed bicycle network and upgrades to pedestrian facilities.⁴⁹

Relative to the Study Area, the CTP references the Morningside/Lenox Park Neighborhood Traffic Calming Study, which offers recommendations designed to reduce overall traffic speed throughout the neighborhood. Traffic control measures, along Johnson Road, range from roadway re-alignment to median improvements and extensions and the placement of bulb outs and on-street parking.⁵⁰

Clifton Corridor Transportation Study (February 2006). The CCTMA commissioned the Clifton Corridor Transportation Study (CCTS) to address growing transportation problems and traffic congestion in the vicinity of Clifton Road. The study notes that the corridor is anticipated to grow over the next two decades with a projected increase in population and employment of at least 25 percent.⁵¹ This transportation study notes that the ability to implement transportation improvement projects within the corridor is expensive and constrained as a result of a number of factors including: intense residential and commercial development on area roadways; and the historic nature of the area. The study recommends the need to employ a balanced set of strategies in order to reduce travel demand, shift to more efficient modes of transportation and to optimize the roadway system to afford more predictable access to vehicles traveling to and through the corridor.⁵² Strategies include land use changes, parking management, expanded transit service and improved bicycle and pedestrian facilities. The study recommends that institutions within the Clifton Corridor integrate the recommended strategies to the extent practicable into their own facilities and service delivery policies. However, the CCTS also indicates that stakeholders with jurisdictional authority such as DeKalb County, and the State of Georgia should implement these transportation strategies given the local, regional, and national importance of the Clifton Corridor.

MARTA Clifton Corridor Transit Initiative - Alternatives Analysis (January 2010). The Clifton Corridor Alternatives Analysis, prepared in partnership by the Metropolitan Atlanta Rapid Transit Authority (MARTA) and the Clifton Corridor Transportation Management Association (CCTMA). This study examined the needs for high-capacity transit connections from Lindbergh Center in north-central Atlanta to employment centers along Clifton Road and the City of Decatur, both in west-central DeKalb County. The Clifton Corridor is home to both residential neighborhoods and a number of significant employment centers including the HHS/CDC, Emory University and Hospital, Children's at Egleston, and the Atlanta VA Medical Center, all of which are lack convenient accessibility to MARTA or interstates. This results in traffic delay, and a congested roadway network. The Alternatives Analysis (AA) identified ways to enhance transportation choices, improve transit services and accessibility to jobs for the

⁴⁹ City of Atlanta Department of Planning & Community Development. *Connect Atlanta*. <http://web.atlantaga.gov/connectatlanta/FAQs.html> (April 1, 2013).

⁵⁰ City of Atlanta Department of Planning & Community Development. *Connect Atlanta: Appendix C Community Plans, Public Meetings and Other Public Input*. http://web.atlantaga.gov/connectatlanta/connectatl09/Appendix_C.pdf (April 1, 2013).

⁵¹ Jacobs prepared on behalf of CCTMA. *Clifton Corridor Transportation Study Phase Two*. February 2006. p. ES-1.

⁵² Ibid. p. ES-3.

commuters and residents in the Clifton Corridor. The AA examined specific alignments and transit technologies and involved an extensive public outreach effort.

This study led to the selection of a Locally Preferred Alternative (LPA), also known as LRT1 in 2012. The LPA would provide 8.8 miles of new light rail service from the Lindbergh Center MARTA Station to the Avondale Marta Station on an alignment that is generally located adjacent to the CSX right-of-way.⁵³ The LPA also includes in-street operations on the medians of Clifton Road through the CDC/Emory area as well as some other roadways. LRT1 met several of the established Purpose and Need criteria including:⁵⁴

- Providing a seamless rail connection across the entire corridor
- Reliable travel time to and from employment centers in the Clifton Corridor (approximately 13 minute travel time from Lindbergh Center to Emory)
- Connecting the Clifton Corridor with the existing heavy rail system and other potential rail projects.

Additionally, it was determined that LRT technology received the strongest public support throughout the AA process and it is easier to integrate into the topography of the Clifton Corridor. MARTA, in conjunction with other agencies, is currently in Phase I of a two phased environmental review process. According to MARTA's *Environmental Review/Environmental Impact Statement Fact Sheet—Spring 2013* Phase II of the environmental review process is tentatively scheduled to begin in July 2013 with completion anticipated in 2015. However, the fact sheet indicates that these schedule dates are to be determined.⁵⁵

A Transportation Special Purpose Local Option Sales Tax (T-SPLOST) referendum was authorized by the Transportation Investment Act of 2010, which was intended to facilitate transportation investment within the state of Georgia. In July 2012, residents of the City of Atlanta and the ten county Atlanta region voted on this referendum which would have funded approximately \$8.5 billion in transportation improvements through a ten year, one percent regional sales tax. The T-SPLOST would have provided funding that would have facilitated numerous projects providing long-lasting remedies to the mobility, connectivity and other transportation issues that have plagued the Clifton Corridor. Revenue from this tax would have potentially funded the Clifton Corridor LPA involving light rail transit, as well as some of the projects described below (TIA 2010 projects). However, this opportunity was not realized as the transportation tax referendum was rejected by voters.

Athens to Atlanta Commuter Rail. This approximately 72-mile rail alignment, also known as the “Brain Train”, would provide commuter rail service to a number of academic institutions (Emory, University of Georgia - Athens) and employment centers found between Athens and Atlanta. Service would be offered five days per week with between six and nine daily round trips. An environmental assessment conducted in 2003 analyzed a number of alignment alternatives utilizing different modes of transit including rail and express bus. The LPA that was advanced involved a rail option using active freight rail tracks with new or upgraded track in some locations, as needed. Ridership forecasts for this service were projected at over 10,600 daily trips by 2030. Approximately 80 percent of forecasted passengers

⁵³ Clifton Corridor Transit Initiative. *LPA Recommendation: LRT 1*. <http://www.itsmarta.com/Clifton-Corr.aspx> (March 6, 2013).

⁵⁴ Ibid.

⁵⁵ MARTA. Clifton Corridor Transit Initiative. *Environmental Review Fact Sheet. Spring 2013*. http://www.itsmarta.com/uploadedFiles/About_MARTA/Planning/Clifton_Corr/Fact%20Sheet%201%20Clifton%20Corridor%20EIS_PD%20Phase%201%20-%20Spring%202013.pdf

were anticipated to board at Gwinnett and DeKalb County stations destined for Emory, HHS/CDC, Atlantic Station, and downtown Atlanta.⁵⁶ The Athens to Atlanta Commuter Rail has been identified in DeKalb County's CTP as a long range project for the 2021 to 2030 time horizon.⁵⁷

This project, if implemented, would improve the ability of commuters and visitors to access the Clifton Corridor using mass transit via the Emory University station stop. In addition, this public transit option could potentially reduce automobile congestion on corridor by reducing the number of vehicles traveling to and from corridor destinations on local roadways.⁵⁸

ARC PLAN 2040 Regional Transportation Plan/Transportation Improvement Program. ARC, the MPO for the Atlanta region, is required by the USDOT to develop a long-range Regional Transportation Plan (RTP), which helps to guide the prioritization and funding of transportation investments for the region. The RTP, a component of PLAN 2040, examines the region's transportation needs and provides a blueprint to deal with anticipated growth through systems and policies. The RTP provides a comprehensive statement of the regional future transportation needs as identified by local jurisdictions, the state, as well as other stakeholders. It contains strategies aimed at improving mobility and access, and defines both short- and long-term transportation strategies and investments to improve the region's transportation system.⁵⁹

By 2040, the Atlanta region is estimated to add an additional 2.8 million residents for a total population of approximately 8.3 million. This projected growth rate reflects an average annual population increase of 92,749 residents. While this future growth is less than the historical 3 percent average annual growth that the region experienced from the 1950s through 1990s, it is significant enough to place a severe burden on regional transportation infrastructure which is already strained.⁶⁰

As noted in the RTP, DeKalb County, along with four other Atlanta region counties (Fulton, Gwinnett, Cobb, and Clayton) houses a concentration of the region's major employment and activity centers. As a result, these counties accommodate the majority of trips both now and in the future.⁶¹

The stated objectives of PLAN 2040 are to increase mobility options for people and goods; preserve the region's environment and improve energy efficiency; foster a healthy, educated, well-trained, safe and secure population; promote places to live with easy access to jobs and services; and identify innovative approaches to economic recovery and long-term prosperity. These broader PLAN 2040 objectives are translated into RTP-specific areas. These criteria include mobility; connections and access; safety; economic growth; community/environment; and maintaining transportation infrastructure in a state of good repair.⁶²

The Roybal Campus is situated within the Clifton Corridor, an area that has been identified in the RTP as a Regional Employment Corridor (REC). Transportation implementation priorities for RECs include but are not limited to the following:

⁵⁶ Georgia Department of Transportation. *2006 Fact Sheet Athens to Atlanta Rail Line*. p. 1.

⁵⁷ DeKalb County Comprehensive Transportation Plan Final Report. May 2007. p. 3-72.

⁵⁸ AECOM/JJG. Clifton Corridor Alternatives Analysis. *Existing Conditions and Future Trends Report*. January 2010. p.2-13.

⁵⁹ Atlanta Regional Commission. *PLAN 2040 RTP – Chapter 1: Introduction*. p. 1-5.

⁶⁰ Atlanta Regional Commission. *PLAN 2040 RTP – Chapter 2: Trends and Forces Impacting the Future*. p. 2-3.

⁶¹ Ibid. p. 2-6.

⁶² Atlanta Regional Commission. *PLAN 2040 RTP – Chapter 3: Plan Development Framework*. p. 3-27.

- Exploring options for innovative parking management strategies, including shared parking
- Enhancing mobility and accessibility for cars, transit, bicycles, and pedestrians by creating streets that accommodate all modes of transportation
- Enhancing pedestrian connectivity
- Improving general operations as well as regional and local services needs within RECs

The Transportation Improvement Plan (TIP) allocates federal funds for use in construction of the highest priority transportation projects in the short term of the RTP (Fiscal Years 2012 through 2017). The TIP must be consistent with the long-range objectives identified in the RTP and must be financially balanced.⁶³ TIP projects located or extending within or immediately adjacent to the Study Area are identified below in Table 3.2-1.

Table 3.2-1: PLAN 2040 RTP Projects within Study Area

ARC ID	Project Name	Project Type	Description
TIP/Programmed			
DK-274	SR 236 (LaVista Road)	Roadway/ Operations & Safety	Intersection improvement at SR 236 and SR42 (Briarcliff Road)
DK-344C	Upgrades to Approximately 31 Signals in DeKalb County	Roadway/ Operations & Safety	Upgrades and/or signal replacements at a number of locations countywide including: Briarcliff Road at Johnson Road; Clifton Road; Clifton Road at North Decatur Road; Houston Mill Road; North Decatur Road, Mason Mill Road, Haygood Drive; and Clairmont Road
TIP/Long Range (Post 2025)			
AR-411	Clifton Corridor High Capacity Rail Service	Transit/Rail Capital	From Lindbergh MARTA Station to Emory University
AR-412	Clifton Corridor High Capacity Rail Service	Transit/Rail Capital	From Emory University to Avondale MARTA Station
Unfunded Aspirations Plan Vision (Post 2025)			
ASP-AR-441	Innovation Crescent Commuter Rail Service	Transit/Rail Capital	From Downtown Atlanta Multimodal Center to Lawrenceville
ASP-AR-442	Innovation Crescent Commuter Rail Service Extension	Transit/Rail Capital	From Lawrenceville to Athens

Sources: ARC GIS Data; PLAN 2040 Regional Transportation Plan and FY 2012-2017 Transportation Improvement Program – Sorted by ARC Project Number; DK-344C PLAN 2040 Project Fact Sheet

Transportation Investment Act of 2010 Projects/Unfunded Projects

Clifton Road at CSX Railroad Bridge Replacement and Associated Improvement to Haygood Road (TIA-DK-021). This unfunded project would reconstruct and expand the bridge over the CSX railroad alignment, add sidewalks and bike lanes as well as resurface and realign Haygood Road. This project has been coordinated with Emory's Master Plan, the Emory Village LCI, CSX, MARTA and the HHS/CDC. The purpose of this project is to alleviate congestion for HHS/CDC, Emory University and nearby hospitals. The bridge would be designed to accommodate future commuter rail, future CSX rail and the existing Emory shuttle bus system. The project would also organize traffic flow by separating a portion of local

⁶³ Atlanta Regional Commission. *Regional Transportation Plan*. <http://www.atlantaregional.com/transportation/regional-transportation-plan> (April 2, 2013).

traffic to Emory from through traffic on Clifton Road. The project would also relocate Haygood Road at North Druid Hills High School near North Decatur Road.⁶⁴ The project is consistent with PLAN 2040 but the project is unapproved and unfunded. In its present form, DeKalb County has indicated that this bridge replacement project does not score well against federal funding criteria.

Decatur to Clifton Corridor – Transit Connectivity and Safety Improvements (TIA-DK-007). This project extending from Decatur to the Clifton Corridor involves the redesign of existing roads and intersections to create complete streets. This project would connect Decatur residents and those traveling on MARTA's East/West line to the Clifton Corridor regional employment center and proposed transit improvements on North Decatur Road. The purpose of this project is to increase the safety of these streets and connectivity to existing and planned transit facilities. The project would also allow those living and travelling through Decatur and DeKalb County to choose from multiple modes of travel to access the HHS/CDC, Emory, and other medical and/or research facilities located within the Clifton Corridor.⁶⁵ Although this project is not identified in PLAN 2040, it is consistent with the plan goal of preserving existing transit services.

Atlanta Regional Freight Mobility Plan (February 2008) / Atlanta Strategic Truck Route Master Plan (ASTRoMAP). This freight mobility plan involved extensive data collection effort including an inventory of trucks routes and origin-destination surveys. A regional economic assessment as well as a community and environmental impact screening were also conducted as part of this study. A needs assessment identified I-285 and I-85 in DeKalb County as a bottleneck interchange location for freight movements. Atlanta is a regional hub in terms of production and goods movement however many truck routes are circuitous or indirect in nature. Due to these factors many truck routes operate inefficiently and/or conflict with existing local traffic regulations or residential neighborhoods. The goal of this plan is to enhance the Atlanta region's economic competitiveness by providing efficient, reliable and safe freight transportation while maintaining the quality of life in the region's communities.⁶⁶

One of the recommendations of the Atlanta Regional Freight Mobility Plan was to develop a regional truck route plan. Based on this recommendation, the ARC developed the ASTRoMap, a project designed to provide regional access that would guide existing and future routing and freight transportation decisions. A review of ASTRoMap data indicated that Clairmont Road operates as a north-south truck route within the Study Area.

⁶⁴ Transportation Investment Act of 2010. Final Investment List Project Fact Sheet (Final-January 2012). *TIA-DK-021 Clifton Road at CSX Railroad – Bridge Replacement and Associated Improvements to Haygood Road.*

⁶⁵ Transportation Investment Act of 2010. Final Investment List Project Fact Sheet (Final-January 2012). *TIA-DK-007 Decatur to Clifton Corridor – Transit Connectivity and Safety Improvements.*

⁶⁶ Atlanta Regional Freight Mobility Plan Final Report prepared for the Atlanta Regional Commission. February 2008. p.3.http://documents.atlantaregional.com/transportation/freight/Freight_Mobility_Plan_Final_Report_Feb%206%202008.pdf (April 5, 2013).

Summary of Transportation Initiatives. There have been a number of studies that have highlighted transportation inefficiencies and mobility challenges within the Clifton Corridor. As indicated in the subsection above, there have been numerous attempts made by government entities to respond to transportation, development and overall quality of life issues within the Clifton Corridor. Such efforts have included transit studies, planning and public policy initiatives at the regional, and county, and local level brought forth by government and interested community partnerships.

While state, county, and local governments have long recognized the importance of addressing the mobility issues within the Clifton Corridor, these efforts have not gained traction or achieved sufficient public support or funding. There has been some success introducing smaller scale projects to the Clifton Corridor including LCIs, Cliff shuttle service as well as the introduction of carpool/vanpool and bicycle programs by Emory University and CDC to their respective campuses. However, major public investment to facilitate the implementation of potentially transformative projects that would create transportation choices or help to alleviate congestion within the Clifton Corridor has not occurred to date. Major projects that remain unfunded include the Clifton Corridor High Capacity Rail Service (Light Rail LPA) and the Athens to Atlanta Commuter Rail or “Brain Train”. The latter is referenced in the PLAN 2040 RTP as the Innovation Crescent Commuter Rail Service and is designated as an aspirational project.

3.2.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, no new construction, major renovations that would add a significant new population or infrastructure improvements would occur on campus. The projected future employment growth of approximately 865 new employees, would be accommodated within existing office, laboratory and support space. Future development within the Study Area is likely to consist of continued densification of institutional land uses and the redevelopment of underutilized commercial areas due to the scarcity of developable land within the Study Area and the presence of well-defined residential neighborhoods. These development trends are consistent with local and regional public policy initiatives including DeKalb County’s Comprehensive Plan.

Under the No Action Alternative, no major changes in land use, zoning or public policy are contemplated. The projected job growth would support the workforce and economic development objectives identified in ARC’s PLAN 2040, the DeKalb County Comprehensive Plan and the 2011 City of Atlanta Comprehensive Development Plan. The anticipated growth in employee population is not anticipated to induce changes in development or zoning within the Study Area, due to limited vacant developable land and well-established residential and institutional uses.

Preferred Alternative

Land Use

The implementation of the Preferred Alternative would result in two new structures on the campus, including a new laboratory and parking deck. The proposed construction would add approximately 350,000 to 450,000 gsf of laboratory space to the campus and result in an increase of approximately 1,200 parking spaces. The Preferred Alternative would increase the density of uses on the campus, however no new land uses would be introduced. No loss of open space on campus would occur, as the structures would be constructed on existing surface parking lots. The loss of surface parking spaces would be replaced by the new parking deck.

All construction would occur on existing HHS/CDC property, and direct impacts to adjacent land uses would not occur. The Roybal Campus is surrounded by well-established residential and institutional land uses, with limited available vacant land. Under the Preferred Alternative, the Roybal Campus would accommodate approximately 1,485 new employees. This level of employee growth is not anticipated to induce any significant commercial or residential land use changes within the Study Area. The additional employee population is not anticipated to have a significant effect on the residential real estate market within the Study Area, as the majority of employees live outside the Study Area. Although additional employees would be beneficial to the local business within the Study Area, induced growth of new commercial land uses are not anticipated. The Preferred Alternative is not anticipated to result in an adverse significant impact on land uses.

Zoning

As previously mentioned, the Roybal Campus is exempt from the *DeKalb County Zoning Ordinance* as the campus property falls under Federal ownership. While the HHS/CDC considers local zoning regulations to the maximum extent practicable as a guiding principal; in some instances, in order to fit the desired program requirements on a specific site, the HHS/CDC may choose not to comply with local codes and requirements. It is possible that the proposed laboratory building would exceed the five-story or seventy foot building height limit within the O-I zoning district. However, outside of the building height limit, the HHS/CDC complies with a number of the zoning requirements of the O-I district. As the HHS/CDC maintains a required 150-foot perimeter security buffer, this setback exceeds the minimum setback requirements of the O-I zoning districts (50 feet public street/20-foot side yard). The Roybal Campus is in compliance with the O-I zoning district lot coverage requirements not to exceed 80 percent as 43 percent of the Roybal Campus is comprised of open green space. The Roybal Campus also complies with the lot width requirements (100-foot frontage along public street), and the minimum lot area of 20,000 square feet of the O-I zoning designation. The implementation of the Preferred Alternative is not anticipated to induce any significant zoning changes within the Study Area nor would it alter zoning designations outside of the Study Area. The Preferred Alternative, which incorporates new laboratory space, a new parking structure, and renovations to existing buildings, would function as a complementary use to existing HHS/CDC facilities on the Roybal Campus. As a result, the implementation of the Preferred Alternative would not alter the institutional use of the campus and no zoning actions would be required.

Public Policy

The Preferred Alternative would be consistent with the relevant public policy initiatives which guide development both within the Clifton Corridor and throughout the region. The employment growth of 1,485 new jobs associated with the Preferred Alternative would support the workforce and economic development initiatives identified in ARC's PLAN 2040, the DeKalb County Comprehensive Plan, and the 2011 City of Atlanta Comprehensive Development Plan. The implementation of the Preferred Alternative would also help to fortify the concentration of medical and research uses co-located within the Clifton Corridor; thereby improving the regional economy.

The Clifton Corridor Transportation Study (CCTS) recommended that institutions integrate more balanced strategies in order to reduce travel demand, shift to more efficient modes of transportation and improving bicycle and pedestrian facilities. A number of Master Plan concepts related to the health and travel habits of employees would be consistent with the recommendations of the CCTS. These include pedestrian mobility and access projects as well as the provision of fitness facilities and functional outdoor spaces. Another guiding Master Plan principle, consistent with many of the transportation policy documents identified above, is the provision of multi-modal transportation choices and improving connectivity to the surrounding area transportation network.

Similar to the No Action Alternative, roadway traffic circulation and congestion are expected to worsen as a result of growth associated with residential, commercial and institutional entities as well as a lack of planned transportation improvements within the Clifton Corridor. While there are various Master Plan policies related to including pedestrian and bike circulation and accessibility, and promoting mode shift such as the continued use of employee rideshare programs, there is limited public and governmental support to further mass transit and other multi-modal initiatives that would curtail single occupancy vehicle travel within the Clifton Corridor (see Section 3.4. Transportation).

The HHS/CDC explored a range of alternatives comprised of various development scenarios during the Master Planning process. These development alternatives provided options that ranged from little to no new growth to almost a 40 percent increase in campus population to approximately 8,900 employees. Each alternative considered a mix of uses such as a blend of laboratory and office building space, an office focus, laboratory development as well as a relocation alternative. Each scenario also included a sub-alternative which included variations in the intensity of development (i.e., moderate/full development). For example, the full build out of Alternative 3B would have resulted in a doubling of new office and laboratory construction to over 870,000-gsf. The HHS/CDC has balanced their strategic and long-term programmatic needs with the characteristics and constraints of the Clifton Corridor when considering the composition of various Master Plan development scenarios. The implementation of the Preferred Alternative would result in less development and the introduction of fewer new employees to the campus than many of the alternatives that were considered earlier in the Master Planning process. As HHS/CDC's mission continues to evolve, program directives may be refined in the future which may in turn necessitate reconsideration of campus growth.

The implementation of the Preferred Alternative would aid in achieving a number of goals and objectives discussed in the above-mentioned plans. As a result, no significant public policy inconsistencies are anticipated as a result of the Preferred Alternative. The Preferred Alternative is not anticipated to result in a significant adverse impact related to public policy.

3.3 Community Facilities and Services

3.3.1 Affected Environment

Community facilities and services consist of public and privately-funded services such as schools, hospitals and medical facilities, as well as emergency services including fire and police protection. These important resources promote the health, safety, and general welfare of the communities within which they are located. The Study Area falls within the western section of DeKalb County, Georgia, between the City of Atlanta and City of Decatur.

There are a total of 23 community institutions consisting of a combination of regional and neighborhood facilities within or immediately adjacent to the Study Area (i.e., within a one-mile radius from the Roybal Campus) that were examined for this analysis. Additionally, fire and police stations located beyond the Study Area limits were included in this assessment as their respective service areas include portions of the Study Area.

An inventory of public facilities and community services by type within and on the periphery of the Study Area is provided below (see Figure 3.3-1: Community Facilities and Table 3.3-1. to Table 3.3-3). This inventory was compiled from community facilities datasets provided by the Atlanta Regional Commission (ARC) and field investigation. In general, a number of health care and medical research-related uses are concentrated along the Clifton Corridor. These include Emory University Hospital, Children's Healthcare of Atlanta at Egleston, and the Atlanta Veterans' Administration (VA) Medical Center. Emory University, with a total enrollment of over 14,000 students is a major educational institution within the Study Area.⁶⁷

Medical Facilities

There are a total of seven health-related facilities with a capacity of approximately 1,238 beds within the Study Area. A concentration of medical uses, comprised of the Wesley Woods Center, Emory University Hospital, and Children's Healthcare of Atlanta at Egleston, is currently located along Clifton Road. Medical facilities within the Study Area are identified in Figure 3.3-1: Community Facilities.

⁶⁷ Emory University. *Facts & Figures*. <http://www.emory.edu/home/about/factsfigures/index.html> (January 21, 2013).

Figure 3.3-1: Community Facilities

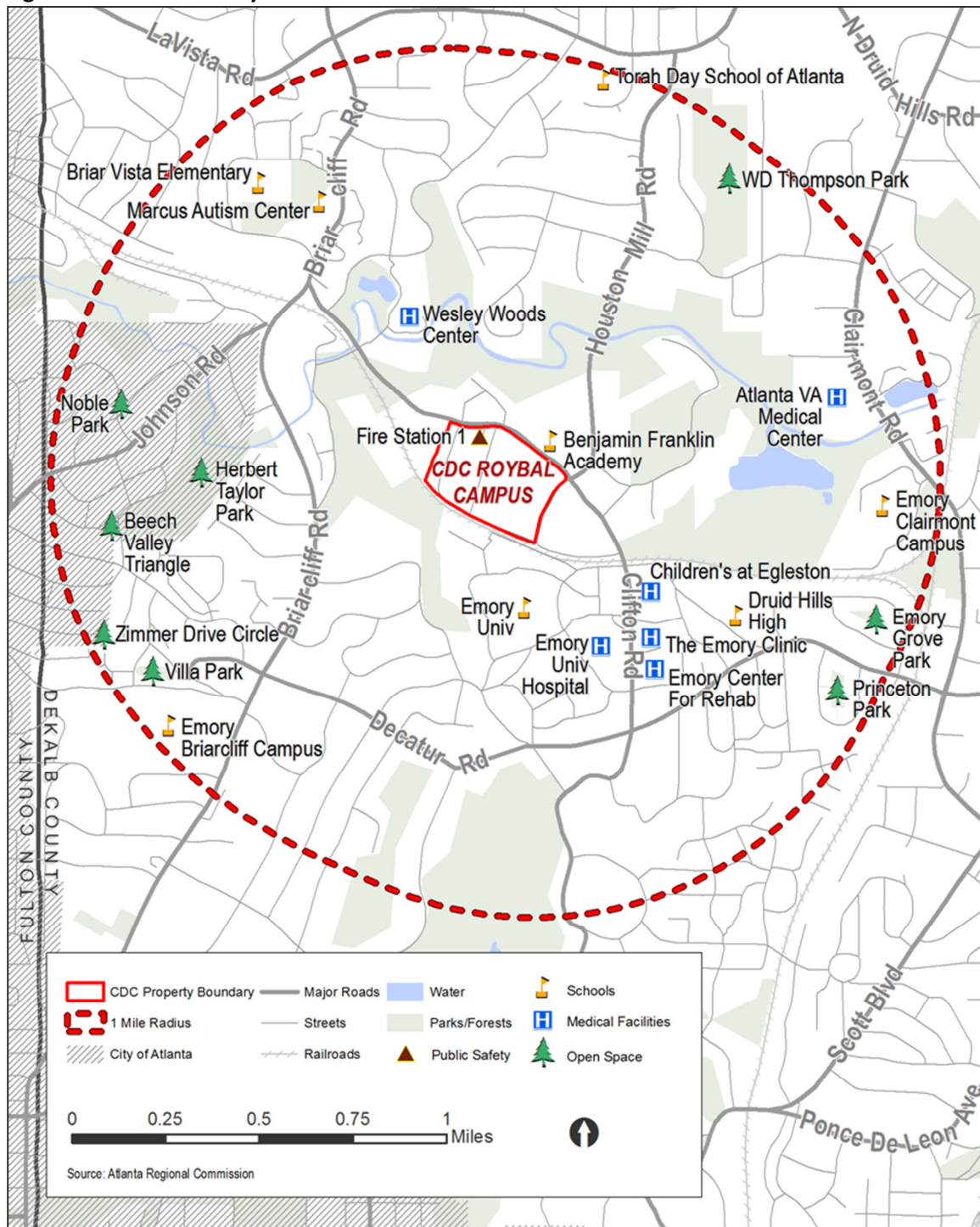


Table 3.3-1: Medical Facilities within the Study Area

Name	Address	Description	Capacity (Beds)
Wesley Woods Center	1821 Clifton Road NE	Comprehensive outpatient and acute-care geriatric care hospital	100 (geriatric hospital); 201 (retirement community apartments)
Emory University Hospital	1364 Clifton Road NE	Tertiary care facility specializing in the care of acutely ill adults	587
The Emory Clinic	1365 Clifton Road NE (Bldgs A,B,C); 1525 Clifton Road NE	Physician practice specializing in adult patient health care and general internal medicine;	10 Clinics located throughout the Atlanta region
Emory Center for Rehabilitation Medicine	1441 Clifton Road NE	Offers advanced, comprehensive rehabilitation services (i.e., OT, PT, speech) on both an inpatient and outpatient basis	56
Children's at Egleston	1405 Clifton Road NE	Located on the Emory University Campus; offers specialized pediatric care including ER, cardiac and transplant services	255
Atlanta VA Medical Center	1670 Clairmont Road	Provides a full-range of patient care services with state-of-the-art technology, education and research on 26 acres in Decatur	178 (hospital); 50 (nursing home); 12 (psychiatric)
Marcus Autism Center	1920 Briarcliff Road	Comprehensive resources for children with autistic spectrum disorders	-
Total			1,238 (beds)/ 201(retirement apts.)

Sources: Atlanta Regional Commission Community Facilities Dataset; Emory Healthcare (Emory University Hospital/Wesley Woods Geriatric Hospital) <http://www.emoryhealthcare.org/emory-university-hospital-atlanta/about-us.html> , <http://www.emoryhealthcare.org/geriatric-hospital/index.html>; Children's Healthcare of Atlanta <http://www.choa.org/About-Childrens/Locations-and-Directions/Childrens-Egleston>

Public Safety Services

HHS/CDC Resources. The HHS/CDC's Office of Safety, Security, and Asset Management (OSSAM), is the lead organizational entity for providing the overall framework, coordination, implementation and oversight for threat information analysis and infrastructure protection program. OSSAM is also tasked with the provision of a secure work environment for HHS/CDC personnel, visitors and contractors. OSSAM branches also provide: coordination and 24-hour security operations to all HHS/CDC-wide facilities including owned and leased sites; campus-wide access control for all HHS/CDC facilities in the metro Atlanta area; physical security in the event of an emergency operation; as well as oversight of local police and life safety services.⁶⁸

Police Protection. The DeKalb County Police Department (DCPD) provides police protection within the county, covering a service area of approximately 271 square miles. The DCPD employs approximately 1,112 police officers as well as 498 support staff.⁶⁹ The Roybal Campus lies within the surveillance of the

⁶⁸ CDC. *Management Analysis and Services Office*. <http://www.cdc.gov/maso/pdf/OSEPfs.pdf> (May 28, 2013).

⁶⁹ DeKalb County. *Police Department*. http://web.co.dekalb.ga.us/DK_Police/index.html (March 1, 2013).

Center Precinct, which generally services the area the west central portion of DeKalb County.⁷⁰ The Center Precinct is located at 1960 West Exchange Place in Tucker, Georgia. This law enforcement coverage is supplemented by the DeKalb County Sheriff's Office (DCSO), headquartered at 4415 Memorial Drive in Decatur. Primary responsibilities of the DCSO include the processing of warrants, court services, and management of the county jail facility.

The Emory University main campus, adjacent to the Roybal Campus is under the jurisdiction of the Emory University Police Department (EUPD). The EUPD also patrols Emory's satellite campuses including the Midtown campus and Oxford College. The department conducts vehicular, pedestrian, and bicycle patrols of the campus. The EUPD also works in conjunction with the DeKalb County Police Department, DeKalb County Sheriff's Office, and City of Atlanta Police Department, as needed. In addition, the police protection in Decatur is provided by the Decatur Police Department.

Fire Protection and Emergency Response. DeKalb County Fire Rescue (DCFR) provides fire protection and emergency medical services within the Study Area and throughout DeKalb County. The DCFR is staffed by over 800 sworn personnel in 26 fire stations across DeKalb County.⁷¹ Engine 1, Truck 1 (Fire Station 1) on 1670 Clifton Road is located immediately adjacent to the Roybal Campus. Basic life support would be provided by Rescue 1, also located at Fire Station 1. These units would be the first to respond to a fire or emergency in the vicinity of the Study Area.

Emory EMS (EEMS) is a student-run, volunteer, emergency medical service that provides 24-hour, year-round basic life support services to the Emory community. EEMS, the first collegiate EMS in the State of Georgia, also responds to off-campus emergencies on roadways and neighborhoods adjacent to the Emory University Campus.⁷² EEMS also coordinates with local public safety providers.

The Decatur Fire Department has a staff of 39 sworn employees, operating out of two fire houses within the City of Decatur.⁷³ Fire Station One at 230 E. Trinity Place is closest to the Study Area. While the City of Decatur, is located beyond the project limits, the DFD's service area is proximate to the Study Area.

Schools

There are a total of five educational facilities within the Study Area consisting of two public schools, two private schools, and one private university. The public institutions within the Study Area fall within the DeKalb County School District, which is the third largest school district in Georgia. The district includes 138 schools with a total enrollment of 98,700 students for the 2012-13 academic year. In addition, the district employs over 13,400 full and part-time employees and is one of the largest employers in the metro Atlanta region.⁷⁴ The Briar Vista Elementary School is located in the northwest portion of the Study Area at 1131 Briar Vista Terrace NE. This public Montessori elementary school offers both Montessori and traditional tracks for students in pre-K through 5th grade.⁷⁵ Druid Hills High School, with an enrollment of 1,820 students, is situated on Haygood Drive, south and east of the Roybal Campus.

⁷⁰ DeKalb County Police Department. *Center Precinct Map*.

⁷¹ DeKalb County Fire Rescue. *History*. <http://web.co.dekalb.ga.us/FireRescue/history.html> (February 28, 2013).

⁷² Emory University. *Emory Police Department Special Services Division*. <http://www.emory.edu/EEMS/Territory.html> (March 1, 2013).

⁷³ City of Decatur. *Inside the Firehouse Doors Decatur Fire Department Annual Report 2010*.

⁷⁴ DeKalb County School District. *Fact Sheet*. Updated September 20, 2012. <http://www.dekalb.k12.ga.us/history> (January 21, 2013).

⁷⁵ Briar Vista Elementary School. *About Us*. <http://www.dekalb.k12.ga.us/briarvista/about.html> (January 22, 2013).

There are a total of three private institutions within the Study Area, including the Torah Day School, a private K through 8th grade school, and the Ben Franklin Academy, a private 125-student high school. Additionally, Emory University is located immediately adjacent to the Roybal Campus. Schools within or immediately adjacent to the Study Area are identified below in Table 3.3-2.

Table 3.3-2: Schools within the Study Area

Name	Address	Facility Type	Student Enrollment
Public Schools			
Briar Vista Elementary School	1131 Briar Vista Terr. NE	Elementary School	386
Druid Hills High School	1798 Haygood Dr.	High School	1,820
Private Schools			
Torah Day School of Atlanta	1985 LaVista Rd. NE	K through 8	361
Benjamin Franklin Academy	1585 Clifton Rd. NE	High School	125
Emory University ¹	201 Dowman Dr.	Private University	14,236
Total Enrollment			16,928

Note: ¹ Emory's Briarcliff Campus and Clairmont Campus are also located within the Study Area.

Sources: DeKalb County School District. *Schools and Centers*. <http://www.dekalb.k12.ga.us/schools-and-centers>; Torah Day School of Atlanta; The Ben Franklin Academy. *History* <http://www.benfranklinacademy.net/about/history>.

Open Space Resources

At the county-wide level, DeKalb County is home to a diverse array of open space resources totaling over 6,400 acres including the Davidson-Arabia Mountain Nature Preserve as well as larger parks such as Mason Mill Park. At the municipal level, the City of Atlanta's Department of Parks, Recreation and Cultural Affairs (DPRCA), maintains approximately 248 parks totaling over 3,364 acres.⁷⁶ There are a total of 8 public parks totaling over 73 acres within the Study Area. Of these, 4 are public parks under the jurisdiction of the City of Atlanta DPRCA. Four park properties are operated by the DeKalb County Department of Recreation, Parks, and Cultural Affairs (DRPCA). The open space resources within the Study Area consist of a mix of garden/pocket parks with passive recreational amenities and community parks with active recreational amenities. The Daniel Johnson Nature Preserve/Herbert Taylor Park, an approximately 35-acre conservation area, is located in the western quadrant of the Study Area. The parcels of land comprising this resource were donated by the Taylor Family to the City of Atlanta in 1972 and 1978 for passive recreational purposes.⁷⁷

A network of trails (both existing and planned) are situated within the Study Area. An existing portion of the Houston Mill Trail runs along the north side of Emory University east to Clairmont Road with conceptual plans for additional linkages. This trail would connect and also provide recreational opportunities and pedestrian access to three prominent Study Area institutions including Emory

⁷⁶ City of Atlanta Department of Parks, Recreation, & Cultural Affairs. *History*. <http://www.atlantaga.gov/index.aspx?page=256> (January 9, 2013).

⁷⁷ Morningside/Lenox Park Association. *Dedication of Herbert Taylor Park (1987)* <http://tk-jk.net/mlpadotorg/History/fog0000000074.html> (January 9, 2013).

University, HHS/CDC and the VA Medical Center. The future Peavine South Trail would begin at North Decatur Road and continue south and east along Peavine Creek. A small portion of this trail running through Emory Village is already built. The Peavine North Road Trail would run from Briarcliff Road along the northwestern edge of the main Emory University Campus to North Decatur Road.⁷⁸ Portions of this trail in the vicinity of the campus are already established. In addition, a future extension of the South Peachtree Creek Trail would extend into the Study Area connecting to Emory University as well as North Druid Hills Road.⁷⁹ These linear connections and future connections would provide additional pedestrian accessibility and cycling opportunities within the Study Area.

Detailed information on open space resources was compiled from the City of Atlanta DPRCA, DeKalb County DRPCA, and Geographic Information Systems (GIS) datasets provided by ARC. Table 3.3-3 provides a complete inventory of existing parkland and recreational resources situated within the Study Area.

Table 3.3-3: Open Space Resources within the Study Area

Name	Address	Type	Acreage	Amenities
City of Atlanta				
Beech Valley Triangle	Beech Valley Rd. NE & Beech Valley Way	Garden Park	0.36	Passive landscaped area
Daniel Johnson Nature Preserve / Herbert Taylor Park	Beech Valley Rd. NE	Conservation	35.2	Conservation area; trails
Noble Park	1710 Noble Dr. NE	Garden Park	0.4	Passive landscaped area; playground
DeKalb County				
Emory Grove Park	1887 Edinburgh Terrace	Community Park	4	Multi-use field; tennis courts; playground and picnic area
Princeton Park	505 Princeton Way	Community Park	3	Playground
Villa Park	-	Community Park	1.7	
W.D. Thompson Park	1760 Mason Mill Rd.	Community Park	28.7	Multi-use field; basketball court; tennis courts; playground; picnic area; trails
Zimmer Drive Circle	Zimmer Dr. NE off of Highland Ave.	Garden Park	0.04	Passive landscaped area
Zonolite Park	Near Briarcliff and Clifton Roads		12	South Fork Conservancy involved in clean up and habitat restoration; future trails
Total			85.4	

Sources: DeKalb County Department of Recreation, Parks, and Cultural Affairs. *Facilities and Amenities*. <http://www.co.dekalb.ga.us/parks/pr-fa-tucker.html>; DeKalb County Parks and Recreation System *Facilities Inventory Matrix* <http://www.co.dekalb.ga.us/parks/pdf/listing.pdf>; City of Atlanta Summary of Park Amenities.

⁷⁸ South Fork Conservancy. *South Fork Conservancy Watershed Vision*. <http://www.southforkconservancy.org/docs/WatershedVision.pdf> (April 10, 2013).

⁷⁹ PATH Foundation. *South Peachtree Creek Trail*. <http://pathfoundation.org/trails/south-peachtree-creek-trail/> (April 10, 2013).

3.3.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, community facilities and services within the Study Area would remain similar to those described for existing conditions. The No Action Alternative would have no direct effect on community resources within the Study Area. Under the No Action Alternative, staffing at the Roybal Campus is anticipated to increase by an estimated 865 employees by 2025. This growth would be accommodated within the existing office, laboratory and support space on campus. In addition, future planned trails and trail connections in the vicinity of Peavine Creek and South Peachtree Creek Trail would provide additional pedestrian connectivity and cycling opportunities within the Study Area. It is anticipated that changes in community facilities would be minimal as there are sufficient community resources to handle the additional demand for services and capacity that would be added to the Study Area. Approximately 43 percent of the Roybal Campus consists of open space comprised of passive recreational amenities including pathways and landscaped green areas. This abundance of existing open space within the campus property would be sufficient to accommodate the increase in campus population under the No Action Alternative. As a result, Study Area open space resources would not be overburdened as a result of the No Action Alternative. Development within the Study Area would continue to reflect similar patterns, and changes in community facilities would be minor and small in scale.

Preferred Alternative

The implementation of the Preferred Alternative would not physically displace or alter any community facilities within the Study Area. Although the Preferred Alternative is anticipated to generate new demand on existing community facilities, these demands for community services would be minimal and are unlikely to overburden existing community facilities. In addition, the campus improvements associated with the Preferred Alternative have been planned as a component of the HHS/CDC's Master Plan. Aside from outlining the physical growth of the Roybal Campus, this initiative also ensures that the campus has adequate capacity for the provision of services.

Based on employee survey data provided by the HHS/CDC, a small number of employees (approximately 3.4 percent) currently reside within one mile of the campus. Growth related to the Preferred Alternative would result in the addition of non-residential employee population of approximately 1,485 to the campus over the course of the day. Based on current neighborhood and campus demographic trends, it is assumed that only a small portion of the future employee population would seek residence within the Study Area. While this potentially small increase in residential population would serve as an extra user group for the Study Area's community resources, the additional population would have a negligible impact on the majority of these facilities. There would not be a significant escalation in the demand for neighborhood services based on this minimal population increase. Given the excess capacity at Briar Vista Elementary School, with 156 available seats, elementary school capacity is expected to be sufficient within the Study Area.⁸⁰ As the DeKalb County School District is approximately 14 percent under capacity with over 15,000 available district wide seats, no deficit in educational services is anticipated beyond the Study Area limits.

⁸⁰ DeKalb County School District. *2020 Vision: Utilization, Capacity, and 2010 Enrollment*. [http://www.dekalb.k12.ga.us/www/documents/vision-2020/school-utilization-capacity-enrollment-\(2010\).pdf](http://www.dekalb.k12.ga.us/www/documents/vision-2020/school-utilization-capacity-enrollment-(2010).pdf) (May 21, 2013).

Similar to the No Action Alternative, the HHS/CDC campus population would continue to use existing passive open space resources within the Roybal Campus. These resources would be sufficient to accommodate the increase in campus population under the Preferred Alternative. As a result, given the ample supply of campus green space, it is not anticipated that employees would use Study Area open space resources to the extent that the utility of these resources would become compromised or strained. As a result, significant adverse open space resources are not anticipated as a result of the Preferred Alternative.

The Preferred Alternative has been reviewed for potential impacts on police, fire and emergency services coverage. Correspondence has been sent to local emergency service providers within or proximate to the Study Area requesting information regarding the potential impact of the Preferred Alternative on their emergency service operations, staffing, and response times. To date, only the Decatur Fire Department has responded. Based on correspondence received, the Decatur Fire Department indicated that the Roybal Campus is beyond its service area and has no objection to the Proposed Project.⁸¹ The Preferred Alternative would contribute to increased traffic within the Study Area which may affect fire and emergency response times.

The Preferred Alternative is not anticipated to place an excessive demand on healthcare facilities, local schools, or other community services since the Master Plan improvements would not introduce a large residential population to the Study Area. As such, the Preferred Alternative would not be expected to overburden the provision or delivery of existing community services in the vicinity of the campus. The Preferred Alternative would not result in significant adverse impacts to public facilities or the services they provide within the Study Area or beyond.

⁸¹ Phone conversation between Jacobs and City of Decatur Fire Department March 13, 2013.

3.4 Transportation

3.4.1 Affected Environment

Introduction

This chapter assesses the potential effects on the transportation system within the Study Area, including an analysis of potential traffic impacts as well as parking, transit and pedestrian network impacts. The Study Area for the transportation analysis was expanded beyond the 1-mile DEIS Study Area in order to encompass key roadways and traffic intersections that could be affected by the Preferred Alternative. The Preferred Alternative involves the construction of a new laboratory, renovation of an existing laboratory, construction of a new parking deck with the capacity for approximately 1,600 spaces, and the reorganization of the HHS/CDC campus transshipping facility, along with additional infrastructure improvements. The parking deck would be located in the southeast portion of the campus proximate to the HHS/CDC Houston Mill Road entrance gate. The increased parking capacity and projected potential campus growth would result in an increase in trips, particularly vehicle trips to and from the campus. This projected growth would affect the surrounding traffic and transportation conditions in the Study Area. Accordingly, this chapter analyzes the potential impacts of the Preferred Alternative on the transportation Study Area.

Methodology

A detailed analysis is appropriate for projects that have the potential to adversely affect the transportation system. This analysis considered input from institutional uses, governmental agencies, and developers with any projects in the Study Area consisting of planned transportation plans and developments that would introduce future growth to the Study Area. Additionally, an assessment of previously conducted transportation and planning studies were factored into the analysis. Technical analyses and a data collection program were also incorporated into the assessment of the transportation network within the Study Area.

Of particular note, a great deal of attention was focused on traffic as this remains a primary concern for residents and institutions within the Clifton Corridor as well as governmental entities with jurisdiction in this area.

The selection criteria for a detailed analysis of intersections involved a review of existing traffic data and the anticipated increase in vehicular traffic as a result of the implementation of the Preferred Alternative. The traffic analysis identifies the location and extent of potential impacts caused by the Preferred Alternative. Details relating to the traffic analysis methodology were developed incorporating feedback from GDOT, DeKalb County's Traffic Division, GRTA and ARC as well as HHS/CDC and Emory University.

In addition, as part of the overall transportation system analysis, qualitative assessments of parking, transit, and pedestrian conditions were conducted. The qualitative assessment involved conducting field observations, as well as a review of relevant documents and studies. In addition, detailed statistical transportation data, collected by the HHS/CDC for fiscal years 2010 through 2012, were reviewed

including Clean Commute Data (see Transit and Pedestrian subsection below). Other statistical trends were studied to help define the extent of multi-modal utilization by Roybal Campus employees. Observations of parking conditions in and around the Roybal Campus were conducted and plans for future parking capacity increases were investigated within the Study Area. Conditions for each of these analysis categories are projected for the No Action Alternative and the Preferred Alternative. The identification and evaluation of transportation improvements needed to mitigate impacts found to be significant is also presented.

Appendix B provides the technical analysis documentation for all analysis relating to this chapter.

Existing Conditions

Roadway Network

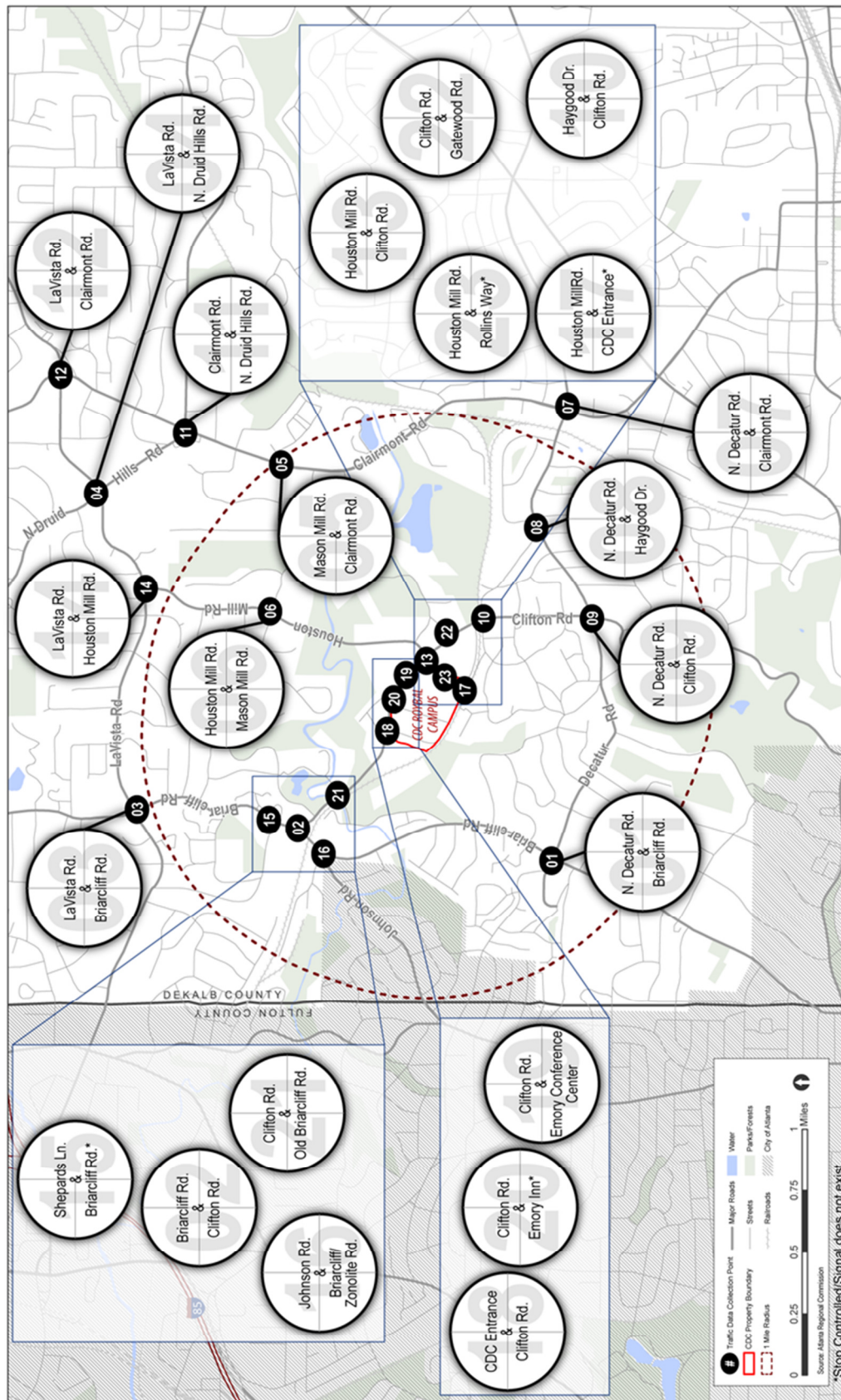
The Roybal Campus is bounded by Houston Mill Road to the east, Emory University property to the West, Clifton Road to the North, and the CSX rail line to the South (refer to Figure 3.4-1: Traffic Volumes Intersection Collection Locations). The Study Area for the traffic impact analysis was derived by identifying key intersections along streets that would most likely be affected by growth resulting from the Preferred Alternative with particular consideration given to well-traveled intersections. For traffic impact analysis purposes, the expanded Study Area is comprised of 23 intersections along LaVista Road, Clairmont Road, Briarcliff Road, Houston Mill Road, and Clifton Road in the vicinity of the Roybal Campus. Figure 3.4-1: Traffic Volumes Intersection Collection Locations also illustrates the Study Area roadway network, the 23 intersection locations, and traffic data collection locations.

The roadway network within the Study Area is comprised of an irregular street grid that consists of roadway types ranging from local roads to heavily traveled thoroughfares. The primary access to the Roybal Campus is provided through HHS/CDC Parkway main entrance situated on Clifton Road between Old Briarcliff Way and Houston Mill Road. An additional entrance is located on the southeastern side of the campus off of Houston Mill Road. Overall, the roadway network in the vicinity of the Roybal Campus carries a significant amount of traffic during the peak hours with congestion and delays experienced throughout the area. The network serves a high volume of commuter traffic, as well as traffic with origins or destinations inside the corridor. Key roadways providing access to the Roybal Campus and the Study Area include the following:

- Clifton Road is an east-west collector roadway that typically provides two lanes in each direction. Clifton Road stretches from Briarcliff Road eastward through North Decatur Road and then southward to DeKalb Avenue where it terminates outside the Study Area. Proximate to the Roybal Campus, Clifton Road carries approximately 22,000 vehicles per day. Observations indicate that Clifton Road experiences heavy congestion with long vehicle queues at several intersections throughout the corridor during the AM and PM peak hours.
- Briarcliff Road is a major north-south thoroughfare that forms the western boundary of the Study Area. Briarcliff Road begins at Ponce De Leon Avenue south of the Study Area and extends northward through the Study Area at North Decatur, Clifton, and LaVista Roads. Proximate to the Study Area, Briarcliff Road provides a single lane in each direction and carries over 22,000 vehicles per day.

- North Decatur Road is a major east-west thoroughfare that is situated along the southern limits of the Study Area. North Decatur Road begins just west of Briarcliff Road and continues eastward through the Study Area to I-285. Proximate to the Roybal Campus, North Decatur Road provides one to two travel lanes in each direction and carries roughly 18,000 vehicles per day.
- LaVista Road is a major east-west road at the north end of the transportation Study Area. The roadway extends from Lindbergh Drive to the west, to points beyond I-285 to the east serving both commuter and local traffic. Within the Study Area, LaVista road typically provides one to two travel lanes in each direction and carries approximately 17,000 vehicles per day. Overall, field observations indicate that LaVista Road operates at or near capacity during the AM and PM peak periods.
- Clairmont Road is a major north-south principal arterial that extends from Peachtree Road southward through the Study Area to Downtown Decatur. Clairmont Road connects I-85 to the major employment centers in the Clifton Corridor. In the Study Area, Clairmont Road typically provides two travel lanes in each direction and carries over 30,000 vehicles per day. Similar to most other major roads in the Clifton corridor, Clairmont Road experiences congestion and queuing at intersections within the Study Area during the weekday peak hours.
- Houston Mill Road is a north-south collector roadway that bisects the Study Area and carries traffic from LaVista Road through Clifton Road to the Roybal Campus' eastern gate. North of Clifton Road, Houston Mill Road could be classified as a residential roadway, however, the convenience it provides by linking motorists to major employment centers and institutions within the Clifton Corridor has resulted in its heavy use by commuter traffic. North of Clifton Road, Houston Mill Road provides a single lane of traffic in each direction and expands to two lanes in each direction adjacent to the Roybal Campus entrance. Field observations indicate that Houston Mill Road experiences heavy congestion in the AM and PM commuter peak hours, particularly north of Clifton Road where only a total of two lanes of traffic are provided for both directions.
- Haygood Drive is a two-lane roadway that extends from the intersection of Clifton Road and Asbury Circle to North Decatur Road. Haygood Drive provides a single travel lane in each direction and provides an alternative route for motorists traveling between Clifton Road and North Decatur Road. Due to limited capacity, Haygood Drive experiences congestion and long queuing, particularly during the commuter peak hours.

Figure 3.4-1: Traffic Volumes Intersection Collection Locations



Existing Traffic Conditions

Weekday traffic counts, including manual turning movement and vehicle classification counts at the Study Area intersections, a 24-hour automatic traffic recorder (ATR) counts along Clifton Road, LaVista Road, North Decatur Road, Clairmont Road, Briarcliff Briarcliff and Houston Mill Road, as well as turning movement counts on Haygood Drive were conducted in the vicinity of the Roybal Campus in October 2012. While HHS/CDC offers flex hours for its employees, it was determined that the majority of employees travel to and from campus during typical AM and PM commuter peak hours. In order to capture the HHS/CDC campus and the Study Area's peak traffic hours, turning movement counts were conducted on a typical midweek day from 7:00 to 9:00 AM and 4:00 to 6:00 PM which represent typical peak commuting hours.

A review of the 24-hour ATR count data as well as data collected from the manual turning movement counts indicated that the Study Area peak hours occur from 7:45 to 8:45 AM and 5:00 to 6:00 PM. Weekday peak hours reflect high commuting activity to/from campus as well as peak through-commuter travel. Through-commuter travel refers to movement of vehicles through the Study Area without making stops within the Study Area. Existing weekday AM and PM peak hour traffic volumes are shown in Figure 3.4-2: Traffic Volumes Existing Conditions (AM) and Figure 3.4-3: Traffic Volumes Existing Conditions PM.

Based on the data collection program, traffic on selected streets within the Study Area is generally higher during the AM peak hour than in the PM peak hour. This is typical of neighborhoods predominantly consisting of residential and commercial uses as people tend to leave their homes and arrive at places of work within a condensed time-span in the morning, compared with people leaving work and arriving at home in the evening. For example, Clifton Road during the weekday carries roughly up to 2,300 vehicles per hour (vph) in the AM and 2,100 vehicles per hour in the PM in both directions proximate to the Roybal Campus. Briarcliff Road, just west of the Roybal Campus carries approximately 2,500 vehicles in the AM and 2,200 vehicles in the PM peak hours. Similarly, LaVista Road services between 1,200 and 1,900 vph during the AM peak hour, while volumes in the PM peak hours were slightly less, registering between 1,000 and 1,600 vph. Clairmont Road is a major arterial which experiences between 1,800 and 2,800 vehicles during the AM and PM peak hours respectively within the Study Area. Traffic conditions on North Decatur Road however, reported similar traffic volumes in the AM and PM peak hour ranging from 1,100 to 1,900 vph in the AM peak period and between 1,000 and 2,000 vph during the PM peak hour within the Study Area.

Figure 3.4-2: Traffic Volumes Existing Conditions (AM)

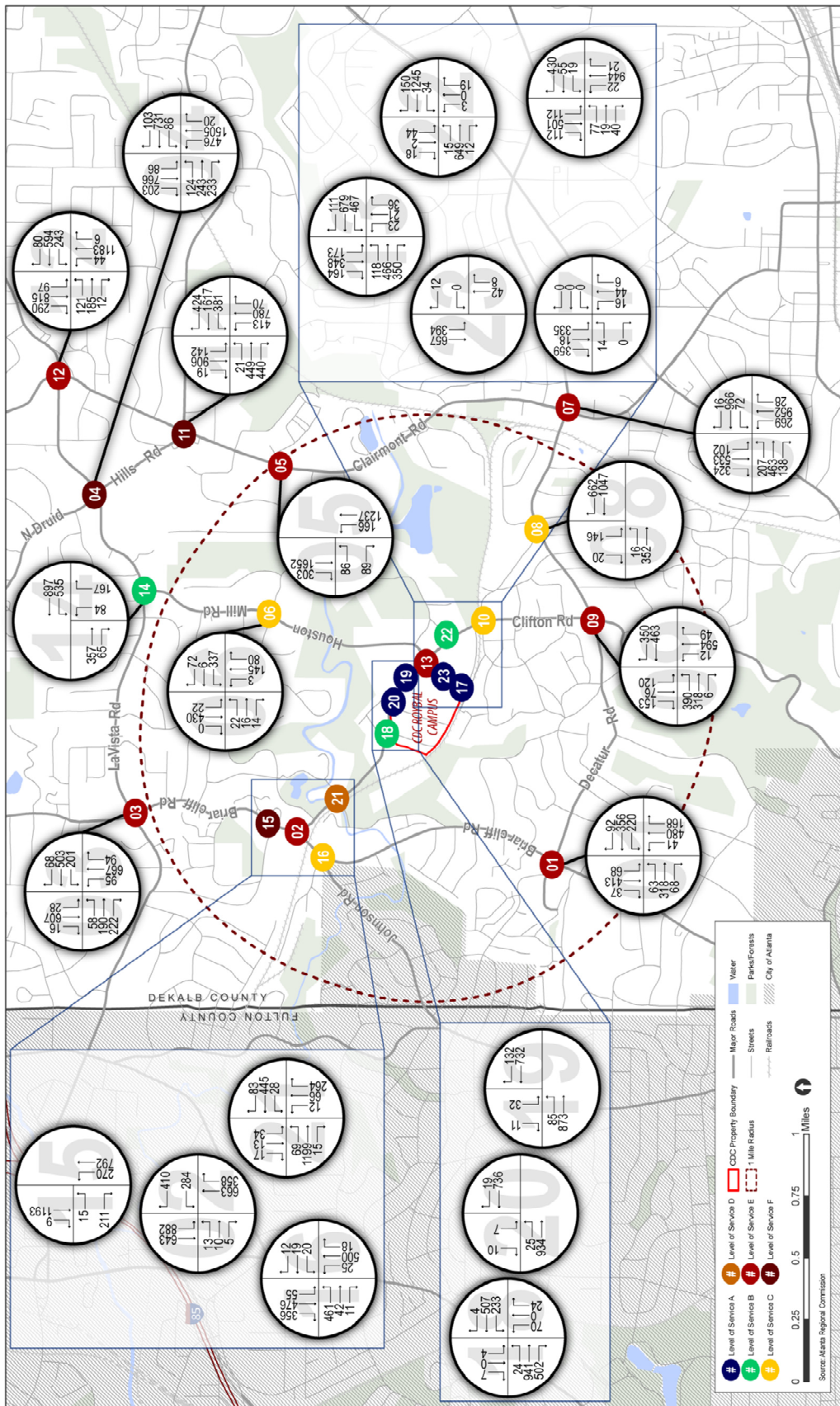
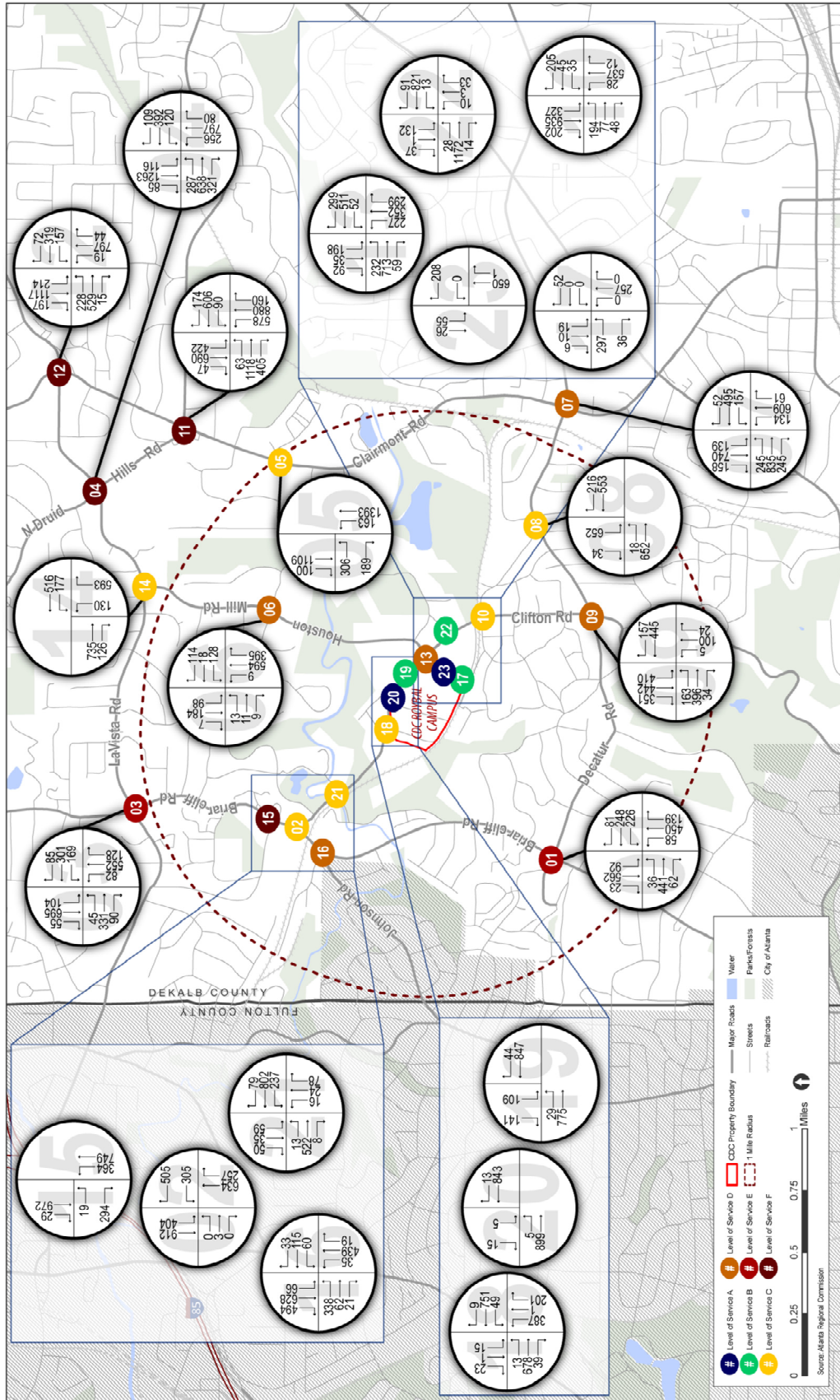


Figure 3.4-3: Traffic Volumes Existing Conditions PM



Traffic Analysis Methodology and Results

The Transportation Research Board (TRB) *Highway Capacity Manual 2010* (HCM 2010) procedures were used as the basis to determine the capacities and level of service (LOS) for each of the intersections comprising the Study Area. For a signalized intersection, LOS is determined for the intersection and its individual lane groups, and is defined in terms of control delays experienced by all vehicles that arrive in the analysis period, including delays incurred beyond the analysis period when the intersection or lane group is saturated. For an unsignalized intersection, LOS is determined for minor movements only and is defined as the total elapsed time between a vehicle stopping at the end of the queue and departing from the stop line.⁸² LOS for signalized and unsignalized intersections were calculated using Synchro Studio version 8 software.⁸³

The delay levels for signalized intersections are described as follows:⁸⁴

LOS A describes operations with very low delay, i.e., less than 10 seconds per vehicle. This occurs when signal progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all.

LOS B describes operations with delay in the range of 10.1 to 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. Again, most vehicles do not stop at the intersection.

LOS C describes operations with delay in the range of 20.1 to 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. The number of vehicles stopping at an intersection is substantial at this level, although many still pass through without stopping.

LOS D describes operations with delay in the range of 35.1 to 55.0 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity (v/c) ratios. Many vehicles stop, and the proportion of vehicles that do not stop declines.

LOS E describes operations with delay in the range of 55.1 to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios.

LOS F describes operations with delay in excess of 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios with cycle failures. Poor progression and long cycle lengths may also be contributing to such delays. Often, vehicles do not pass through the intersection in one signal cycle.

The LOS thresholds for unsignalized intersections differ slightly from those for signalized intersections. Delay levels for unsignalized intersections are described below.⁸⁵

⁸² Transportation Research Board, *Highway Capacity Manual 2010*, 2010, p. 18-5 – 18-7

⁸³ Trafficware, *Synchro Studio 8*, 1993-2011.

⁸⁴ Transportation Research Board, *Highway Capacity Manual 2010*, 2010, p. 18-5 – 18-7

LOS A describes operations with very low delay, i.e., less than 10 seconds per vehicle. This generally occurs when little or no delay is experienced at the intersection.

LOS B describes operations with delay in the range of 10.1 to 15.0 seconds per vehicle. This generally occurs when short traffic delays are experienced at the intersection.

LOS C describes operations with delay in the range of 15.1 to 25.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. This generally occurs when average traffic delays are experienced at the intersection.

LOS D describes operations with delay in the range of 25.1 to 35.0 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable, and longer traffic delays are experienced.

LOS E describes operations with delay in the range of 35.1 to 50.0 seconds per vehicle. At LOS E, there is obvious congestion, and very long traffic delays are experienced at the intersection.

LOS F describes operations with delay greater than 50.0 seconds per vehicle. At LOS F, there is heavy congestion, and excessive traffic delays are experienced at the intersection.

For both signalized and unsignalized intersections, LOS A, B, and C are considered acceptable; LOS D is considered marginally acceptable for delays shorter than or equal to those at mid-LOS D, and marginally unacceptable for delays longer than mid-LOS D; and LOS E and F are considered unacceptable.

Existing Conditions LOS Results

Each of the intersections comprising the Study Area was analyzed in terms of its capacity to accommodate existing traffic volumes as defined by the resulting LOS. A summary of the findings are presented in Table 3.4-1 and key issues are discussed below.. Overall, many key intersections within the Study Area function with moderate to high levels of delay, some of which contain multiple individual movements/approaches operating at unacceptable LOS E or F. Generally, Study Area intersections experience slightly less delay during the PM peak hour due to lower traffic volumes. Intersections currently operating at poor levels of service and high delay include:

Clifton Road/Briarcliff Road operates at an overall intersection LOS E during the AM peak period. Specifically, Clifton Road, during the AM peak hour experiences heavy delays at the westbound approach. Traffic conditions during the PM peak hour are less congested, operating at an overall LOS C.

Clifton Road/Houston Mill Road operates at an overall intersection LOS E during the AM peak period. The capacity analysis indicates that the southbound approach is over capacity, experiencing long queuing and heavy delays. During the PM peak period, the northbound through movement is at or near capacity, operating at LOS E, and also experiences long delays.

⁸⁵ Ibid.

Briarcliff Road/LaVista Road operates at an overall intersection LOS E in both the AM and PM peak periods. The majority of approaches function at high LOS D or worse with the eastbound and westbound movements experiencing the heaviest delays.

LaVista Road/North Druid Hills Road operates at an overall intersection LOS F with significant delays in both the AM and PM peak period. Specifically, the northbound and southbound approaches experience heavy congestion and delays.

LaVista Road/Clairmont Road operates at overall intersection LOS E during the AM peak hour and LOS F during the PM peak hour. During the AM peak hour, the westbound, northbound, and southbound approaches function at LOS E or worse. The northbound and southbound approaches function at LOS E or worse, with the southbound approach experiencing heavier delays.

Clairmont Road/North Druid Hills Road operates at an overall intersection LOS F during both the AM and PM peak hours. The westbound and northbound approaches experience the longest delays in the AM, while the northbound and southbound delays are heaviest in the PM. These approaches function at an unacceptable LOS F.

Clairmont Road/Mason Mill Road operates at an overall intersection LOS E during the AM peak hour. The southbound approach functions at LOS F and experiences the highest delays at the intersection.

Clairmont Road/North Decatur Road operates at an overall LOS E during the AM peak period. The Clairmont Road northbound and southbound approaches experiences the heaviest delays while the eastbound left turn from North Decatur to Clairmont Road is found to be a difficult movement.

North Decatur Road/Clifton Road operates at an overall intersection LOS E during the AM and PM peak hours. The capacity analysis indicates that the northbound and southbound approaches operate with significant delays in the AM peak hour, both of which functioning at LOS F. In addition, the southbound left-turn movement experiences high delays during both peak periods.

North Decatur Road/Briarcliff Road operates at an overall intersection LOS E during both the AM and PM peak hours. The majority of individual movements function at LOS E or worse with the westbound left turn movements during both peak hours experiencing the highest delays.

The unsignalized intersection of Briarcliff Road and Shepards Lane functions with heavy delays on Shepards Lane's eastbound approach and Briarcliff Road's northbound left turn movement. Insufficient gaps in northbound and southbound traffic flows make it difficult to make turns on to and off of Briarcliff Road.

Table 3.4-1: 2012 Existing Conditions

2012 Existing Conditions								
INTERSECTION & APPROACH		Mvt.	Weekday Peak Hour					
			AM			PM		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
Clifton Road at Briarcliff Road								
Driveway	EB	LTR	0.13	44.2	D	0.01	34.7	C
Clifton Road	WB	LT	1.15	153.6	F	0.86	72.1	E
		R	0.68	9.9	A	0.73	13.3	B
Briarcliff Road	NB	LT	0.77	69.2	E	0.55	44.0	D
		R	0.55	21.1	C	0.40	12.3	B
	SB	L	1.09	82.4	F	0.79	27.9	C
		TR	0.29	8.3	A	0.44	8.6	A
	Overall Intersection	-	1.15	55.4	E	0.86	26.9	C
Clifton Road at Old Briarcliff Road								
Clifton Road	EB	LTR	0.59	7.9	A	0.47	31.2	C
	WB	LTR	0.28	3.6	A	0.88	87.5	F
Old Briarcliff Road	NB	LTR	1.21	153.1	F	0.79	20.3	C
Towers Circle	SB	LTR	1.29	238.7	F	0.25	4.4	A
	Overall Intersection	-	1.29	40.8	D	0.88	21.4	C
Clifton Road at HHS/CDC Entrance								
Clifton Road	EB	LTR	0.76	11.5	B	0.37	11.4	B
	WB	L	0.80	39.4	D	0.12	5.7	A
		TR	0.19	2.6	A	0.33	6.9	A
HHS/CDC Entrance	NB	L	0.38	66.8	E	1.00	108.7	F
		LTR	0.23	4.9	A	1.08	131.9	F
		R	0.12	1.2	A	0.48	9.5	A
Driveway	SB	LTR	0.10	1.1	A	0.23	26.6	C
	Overall Intersection	-	0.80	12.9	B	1.08	32.0	C
Clifton Road at Emory Conference Center								
Clifton Road	EB	L	0.18	2.7	A	0.07	4.6	A
		T	0.34	2.6	A	0.31	5.0	A
	WB	T	0.32	5.9	A	0.39	8.9	A
		R	0.15	2.0	A	0.05	4.4	A
Emory Conference Center	SB	L	0.38	61.5	E	0.68	62.9	E
		R	0.13	24.1	C	0.53	11.0	B
	Overall Intersection	-	0.38	5.2	A	0.68	11.4	B
Clifton Road at Houston Mill Road								
Clifton Road	EB	L	0.46	25.1	C	0.58	25.5	C
		TR	1.14	116.4	F	0.58	32.9	C
	WB	L	0.95	49.9	D	0.21	33.6	C
		T	0.50	22.8	C	0.46	54.3	D
		R	0.16	3.1	A	0.51	37.0	D
Houston Mill Road	NB	L	0.23	30.3	C	0.52	30.2	C
		T	0.08	41.4	D	0.90	72.8	E
		R	0.10	0.5	A	0.61	17.1	B
	SB	L	0.36	30.1	C	0.77	47.2	D
		TR	0.95	70.2	E	0.32	17.9	B
	Overall Intersection	-	1.14	62.3	E	0.90	39.3	D
Clifton Road at Gatewood Road								
Clifton Road	EB	L	0.06	10.0	A	0.08	2.4	A
		TR	0.29	22.4	C	0.51	10.7	B
	WB	L	0.07	2.6	A	0.05	4.9	A
		TR	0.56	5.1	A	0.42	6.7	A
Driveway	NB	LTR	0.16	1.5	A	0.20	19.4	B
Gatewood Road	SB	LTR	0.64	66.2	E	0.83	75.9	E
	Overall Intersection	-	0.64	12.9	B	0.83	14.5	B
Clifton Road at Haygood Road								

2012 Existing Conditions								
INTERSECTION & APPROACH		Mvt.	Weekday Peak Hour					
			AM			PM		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Clifton Road	SB	L	0.68	74.1	E	0.71	33.9	C
		TR	0.49	8.6	A	0.71	20.3	C
	NB	L	0.08	16.7	B	0.14	20.9	C
		TR	0.91	40.1	D	0.46	31.8	C
Asbury Circle	EB	L	0.67	46.9	D	0.76	51.1	D
		TR	0.12	8.6	A	0.27	25.2	C
Haygood Drive	WB	L	0.06	27.8	C	0.28	52.8	D
		TR	0.94	49.2	D	0.83	42.1	D
	Overall Intersection	-	0.94	35.0	C	0.83	29.5	C
Houston Mill Road at Mason Mill Road								
Houston Mill Road	NB	LTR	0.30	14.2	B	1.07	66.5	E
	SB	LTR	0.56	20.6	C	0.57	15.0	B
Mason Mill Road	EB	LTR	0.11	16.6	B	0.10	21.4	C
	WB	LTR	0.92	56.0	E	0.79	44.1	D
	Overall Intersection	-	0.92	31.1	C	1.07	53.0	D
Briarcliff Road at LaVista Road								
Briarcliff Road	NB	L	0.65	43.4	D	0.69	54.2	E
		T	0.93	51.6	D	0.84	57.9	E
		R	0.14	2.4	A	0.20	12.5	B
	SB	L	0.26	25.5	C	0.64	37.4	D
		T	0.89	56.7	E	0.92	57.0	E
		R	0.03	0.1	A	0.08	0.2	A
LaVista Road	EB	L	0.49	39.0	D	0.24	31.0	C
		TR	0.93	73.7	E	0.97	89.8	E
	WB	L	0.82	55.5	E	0.84	71.9	D
		TR	1.01	77.4	E	0.83	70.5	F
	Overall Intersection	-	1.01	58.8	E	0.97	60.2	E
LaVista Road at Houston Mill Road								
LaVista Road	EB	TR	0.37	9.2	A	0.83	35.1	D
	WB	L	0.67	12.9	B	0.53	21.8	C
		TR	0.59	13.1	B	0.39	6.6	A
Houston Mill Road	NB	L	0.61	81.4	F	0.70	80.3	F
		R	0.14	0.2	A	0.48	1.2	A
	Overall Intersection	-	0.67	14.1	B	0.83	21.2	C
LaVista Road at N Druid Hills Road								
LaVista Road	EB	L	0.38	21.8	C	0.60	38.5	D
		T	0.14	26.1	C	0.41	40.4	D
		R	0.27	10.5	B	0.41	23.9	C
	WB	L	0.14	19.3	B	0.34	22.5	C
		T	0.43	34.9	C	0.26	31.2	C
		R	0.13	12.0	B	0.15	12.5	B
N Druid Hills Road	NB	L	3.77	-	F	1.30	193.8	F
		TR	2.05	504.1	F	1.07	105.6	F
	SB	L	0.70	67.6	E	0.83	77.7	E
		TR	1.48	261.8	F	1.83	412.7	F
	Overall Intersection	-	3.77	358.9	F	1.83	168.6	F
LaVista Road at Clairmont Road								
LaVista Road	EB	L	0.61	62.6	E	0.70	54.1	D
		TR	0.28	16.0	B	0.85	47.6	D
	WB	L	0.52	29.9	C	0.72	43.9	D
		TR	1.08	101.1	F	0.67	46.2	D
Clairmont Road	NB	L	0.34	31.3	C	0.09	44.2	D
		TR	1.16	96.7	F	0.71	77.7	E
	SB	L	0.68	52.3	D	0.91	64.9	E
		TR	1.01	76.0	E	1.15	119.3	F

2012 Existing Conditions									
INTERSECTION & APPROACH			Mvt.	Weekday Peak Hour					
				AM			PM		
				V/C	Control Delay	LOS	V/C	Control Delay	LOS
Overall Intersection			-	1.16	79.4	E	1.15	81.2	F
Clairmont Road at N Druid Hills Road	Clairmont Road	SB	L	0.16	24.8	C	1.30	180.0	F
			TR	0.69	26.9	C	0.91	87.3	F
	NB	L	L	1.51	293.4	F	1.24	162.5	F
			TR	1.27	167.1	F	1.11	108.5	F
N Druid Hills Road	EB	L	L	0.09	40.6	D	0.18	7.1	A
			T	0.46	52.3	D	0.84	35.8	D
	WB	R	R	0.75	37.0	D	0.51	17.4	B
			L	1.25	171.8	F	0.50	30.0	C
		T	T	1.86	422.6	F	0.44	32.0	C
			R	0.72	26.3	C	0.24	4.0	A
Overall Intersection			-	1.86	192.2	F	1.30	80.9	F
Clairmont Road at Mason Mill Road	Clairmont Road	SB	TR	1.14	113.0	F	0.79	28.2	C
			L	0.66	67.0	E	0.71	48.1	D
	NB	L	T	0.57	7.1	A	0.69	18.5	B
			LR	0.52	47.1	D	0.95	73.9	E
Overall Intersection			-	1.14	69.3	E	0.95	33.6	C
Clairmont Road at N Decatur Road	Clairmont Road	SB	L	0.67	71.9	E	0.50	47.0	D
			TR	1.03	61.8	E	0.90	71.4	E
	NB	L	L	0.99	92.4	F	0.99	111.7	F
			T	0.99	72.4	E	0.79	63.0	E
		R	R	0.05	0.2	A	0.13	0.5	A
			L	0.93	82.2	F	0.54	30.6	C
N Decatur Road	EB	L	TR	0.47	28.5	C	0.73	41.7	D
			L	0.26	22.5	C	0.79	48.4	D
	WB	L	TR	0.91	58.6	E	0.46	38.0	D
			-	1.03	61.1	E	0.99	53.0	D
Overall Intersection			-	1.03	61.1	E	0.99	53.0	D
N Decatur Road at Haygood Road	N Decatur Road	WB	TR	0.86	43.5	D	0.37	8.5	A
			LT	0.22	9.8	A	0.36	12.0	B
Haygood Road	SB	L	LR	0.23	34.5	C	0.83	60.9	E
			-	0.86	31.2	C	0.83	26.0	C
Overall Intersection			-	0.86	31.2	C	0.83	26.0	C
N Decatur Road at Clifton Road	N Decatur Road	WB	LT	0.80	47.9	D	1.13	127.3	F
			R	0.60	23.9	C	0.36	13.7	B
	EB	L	L	0.95	58.0	E	0.74	48.5	D
			TR	0.17	11.6	B	0.36	29.2	C
Clifton Road	SB	L	L	1.15	186.4	F	0.77	55.8	E
			TR	0.52	6.2	A	0.98	43.7	D
	NB	L	LTR	1.06	99.1	F	0.17	31.4	C
			-	1.15	57.2	E	1.13	55.7	E
Overall Intersection			-	1.15	57.2	E	1.13	55.7	E
N Decatur Road at Briarcliff Road	N Decatur Road	WB	L	1.02	98.0	F	1.15	144.1	F
			TR	0.79	54.7	D	0.58	43.7	D
	EB	L	L	0.38	32.3	C	0.12	25.4	C
			TR	0.87	66.7	E	0.94	75.6	E
Briarcliff Road	NB	L	L	0.17	21.6	C	0.34	26.6	C
			TR	1.02	80.4	F	0.91	61.6	E
	SB	L	L	0.60	67.0	E	0.54	59.2	E
			TR	0.66	24.5	C	0.87	58.0	E

2012 Existing Conditions									
INTERSECTION & APPROACH		Mvt.	Weekday Peak Hour						
			AM			PM			
			V/C	Control Delay	LOS	V/C	Control Delay	LOS	
Overall Intersection		-	1.02	60.9	E	1.15	67.6	E	
N Decatur Road at Johnson Road									
N Decatur Road		NB	L	0.05	14.0	B	0.20	27.9	C
			TR	0.26	12.6	B	0.42	25.5	C
		SB	L	0.13	10.4	B	0.27	38.2	D
			T	0.25	9.2	A	0.45	39.6	D
			R	0.36	2.3	A	0.57	16.7	B
Johnson Road		EB	L	0.84	80.9	F	0.49	48.3	D
			TR	0.83	78.6	E	0.49	47.5	D
Driveway		WB	LTR	0.51	71.1	E	0.94	97.3	F
Overall Intersection		-	0.84	27.8	C	0.94	39.6	D	
Unsignalized									
Briarcliff Road at Shepards Lane									
Briarcliff Road		NB	L	0.97	85.0	F	0.80	31.3	C
			T	0.48	0.0	A	0.56	0.0	A
		SB	TR	0.72	0.0	A	0.61	0.0	A
Shepards Lane		EB	LR	4.94	-	F	2.53	756.1	F
Overall Intersection		-	4.94	1082.0	F	2.53	103.3	F	
Clifton Road at Emory Inn									
Clifton Road		EB	LT	0.40	0.3	A	0.38	0.1	A
		WB	TR	0.29	0.0	A	0.36	0.0	A
Emory Inn		SB	LR	0.05	13.4	B	0.05	13.0	B
Overall Intersection		-	0.40	0.4	A	0.38	0.2	A	
Houston Mill Road at Rollins Way									
Houston Mill Road		SB	LT	0.28	2.7	A	0.09	2.9	A
		NB	TR	0.03	0.0	A	0.30	0.0	A
Rollins Way		WB	LR	0.02	8.6	A	0.42	14.9	B
Overall Intersection		-	0.28	3.5	A	0.42	4.1	A	
Houston Mill Road at HHS/CDC Driveway									
Houston Mill Road		SB	LT	0.23	7.7	A	0.02	5.2	A
			R	0.23	0.0	A	0.00	0.0	A
		NB	TR	0.02	2.2	A	0.00	0.0	A
HHS/CDC Driveway		EB	L	0.11	22.7	C	0.79	36.3	D
			R	0.00	0.0	A	0.04	8.5	A
Garage		WB	LTR	0.00	0.0	A	0.12	10.5	B
Overall Intersection		-	0.23	4.2	A	0.79	17.3	B	

Notes:

1. "Mvt." refers to the specific intersection approach lane(s) and how the lane(s) operate and/or specific pavement striping. TR is a combined through- right turn lane(s), R or L refers to exclusive right- or left-turn movement lane(s), and LTR is a mixed lane(s) that allows for all movement types. It is possible that lane uses change in different time periods. For example, a very heavy right-turn volume may exceed a single lane capacity, thus forcing drivers to use (or "share") an adjacent lane for additional travel capacity in the AM, but as flows decrease later in the day, a shared lane may not be needed. DefL is a defacto left-turn lane automatically input by the HCS software when the volume of left turns is high enough to create a "natural" turn lane to accommodate the demand; through movements would then use the adjacent travel lane.
2. V/C is the volume-to-capacity ratio for the Mvt. listed in the first column. Values above 1.0 indicate an excess of demand over capacity.
3. Level of service (LOS) for signalized intersections is based upon average control delay per vehicle (sec/veh) for each lane group listed in the Mvt. Column as noted in the 2000 HCM - TRB.
4. The delay calculations for signalized intersections represent the average control delay experienced by all vehicles that arrive in the analysis period, including delays incurred beyond the analysis period when the lane group is saturated.
5. Level of service (LOS) for unsignalized intersections is based upon total average delay per vehicle (sec/veh) for each lane group listed in the Mvt. column as noted in the 2000 HCM - TRB. The delay calculations for signalized intersections represent the average control delay experienced by all vehicles that arrive in the analysis period, including delays incurred beyond the analysis period when the lane group is saturated.

Parking

The Roybal Campus contains a total of six parking facilities comprised of three surface parking lots and three parking decks. These facilities, detailed in Table 3.4-2, provide a total of 3,300 parking spaces including maintenance parking accommodating approximately 39 vehicles.

Table 3.4-2: Roybal Campus Parking Facilities

Parking Facility	Capacity
North Parking Deck	373
West Parking Deck	978
South Parking Deck	1,503
Surface Lot North	67
Surface Lot Central	147
Surface Lot South	193
Maintenance Parking Spaces	39
Total Parking Supply	3,300

Source: HHS/CDC Roybal Campus 2025 Master Plan

Currently, parking within the Roybal Campus is at full capacity. The parking capacity of the Roybal Campus was set at 3,300 parking spaces in the Record of Decision (ROD) for the previous EIS completed for the Roybal Campus in 1996.

Available parking at neighboring institutions and businesses are limited and are generally unavailable for use by outside patrons or employees. New parking facilities were completed in 2012 as part of the Emory Point development, located across the street from Roybal Campus. Full utilization of additional parking spaces is expected with the final completion of the Emory Point development.⁸⁶

Transit and Pedestrian

Overall, the Study Area exhibits a lack of properly configured or fully developed bicycle network and pedestrian infrastructure. In order to determine the impacts of pedestrian conflicts at crosswalks, pedestrian counts were recorded during the peak hours at Study Area intersection crosswalks which were incorporated into the traffic analysis. Transit service, further detailed below, has been similarly constrained and limited by historic development patterns, the existing roadway network, and a lack of funding.

The HHS/CDC has instituted a Transportation Choices program which is focused on both increasing the total number of clean commuters and the frequency of clean commuting to reduce the use of single-occupancy motor vehicles for commuter travel.⁸⁷ Some of the benefits available to HHS/CDC employees include:

⁸⁶ Telephone Conversation with Jason Frost, Cousins Properties. March 26, 2013.

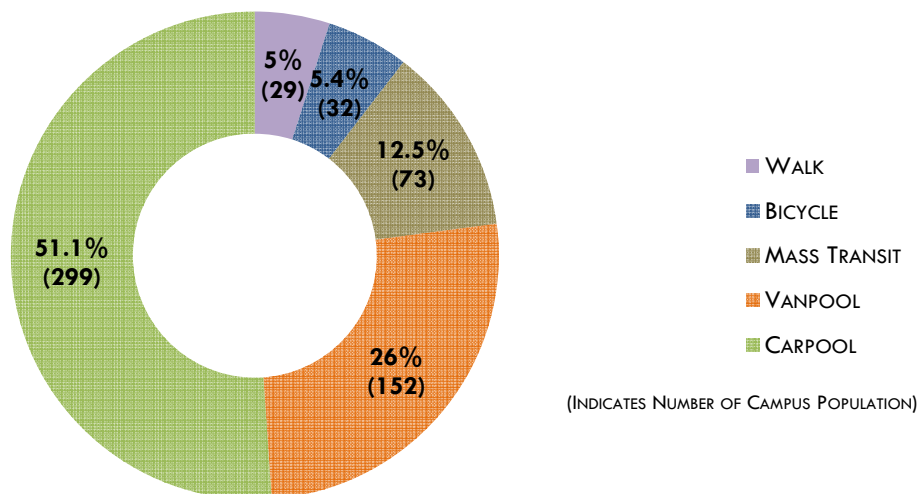
⁸⁷ U.S. Centers for Disease Control and Prevention. *Transportation Statistics for Fiscal Year 2012*. February 12, 2013. p. 1.

- Fare Share, a \$125 public transportation subsidy program designed to reimburse employees for vanpooling and mass transit expenses
- Preferred carpool and vanpool parking
- Secure bicycle parking, lockers and showers
- Active membership in the CCTMA and platinum level partnership with the Clean Air Campaign
- Technological infrastructure to enable HHS/CDC personnel to telecommute
- Web-based meeting, videoconferencing to support a reduction in work related travel

HHS/CDC has conducted “Try-It-Days” over the last three years (FY 2010 - 2012) at each of their metro Atlanta facilities. In 2012, commuter counts conducted at the Roybal Campus indicated that approximately 585 personnel or approximately 12 percent of the campus population walked, biked, used transit or carpooled to work. This is an increase of over 3 percent from 2010 when 9 percent of the campus population or approximately 400 commuters used clean commuting modes.

For the purpose of this assessment, the “Try-It-Day” commuter counts for the Roybal Campus were utilized to identify the typical mode split at the facility. Of those Roybal Campus commuters who traveled to work by a mode other than a single-occupancy vehicle, approximately 51.1 percent used carpooling, followed by vanpooling (26 percent). These modes are further detailed in the Figure 3.4-4: Roybal Campus Clean Commuting Modes FY 2012.

Figure 3.4-4: Roybal Campus Clean Commuting Modes FY 2012



Pedestrian Conditions

Many of the large institutional uses within the Clifton Corridor, including the Roybal Campus and Emory University contain sidewalks and pedestrian pathways. Some residential streets within the Study Area contain sidewalks (i.e., Cornell Road NE, Harvard Road NE, Emory Road NE) while others do not (i.e., Poplar Grove Drive NE, Briar Hills Drive NE). In general, sidewalks on highly used Study Area streets conflict with travel lanes and are segmented by large land uses. Typically, many of the sidewalks within

the Study Area lack landscaping or streetscape amenities such as landscaping or benches. Major elements of the pedestrian network within the Study Area are summarized below.

Clifton Road. Continuous sidewalks are provided along both sides of Clifton Road extending north from North Decatur Road past the Roybal Campus, Emory University and the adjacent healthcare facilities. There is one, narrow sidewalk on the north side of the street approaching the intersection of Clifton Road and Briarcliff Road. There is also an existing bridge and tunnel that provide connectivity between health care facilities on either side of Clifton Road. This infrastructure also provides access to parking situated east of Clifton Road.

Roybal Campus. Sidewalks and pathways are present throughout much of the Roybal Campus. This infrastructure on internal campus roadways provides pedestrian connectivity between existing buildings as well as parking decks and surface lots. From Clifton Road, a sidewalk is located along the east side of the HHS/CDC Parkway. Sidewalks are also present along portions of Clifton Way and the Houston Mill Road campus entrance.

Emory University. Pedestrian circulation around the Emory University campus is good as there is a well-developed network of internal sidewalks and paths. Motor vehicle access is restricted for an extensive portion of the inner main campus, west of Clifton Road. Pedestrian access is also available between the Clairmont campus and the main campus by way of Starvine Way.

Briarcliff Road. This roadway contains discontinuous sidewalks along its length. Portions of Briarcliff Road have sidewalks on either side or at least one side of the street. However, there are segments of this roadway that lack any safe pedestrian sidewalk access. Within the Study Area, sidewalks are present on Briarcliff Road between Clifton Road and LaVista Road. There is also a sidewalk on the east side of Briarcliff Road up to Poplar Grove Drive NE.

LaVista Road. There is a continuous sidewalk along both sides of LaVista Road between Briarcliff Road and North Druid Hills Road.

Clairmont Road. Sidewalks along Clairmont Road north of North Decatur Road are inconsistent with several disconnected segments. Pass LaVista Road, there are numerous gaps in the sidewalk coverage.

North Decatur Road. West of Clairmont Road, North Decatur Road contains continuous sidewalks on both sides of the street towards Briarcliff Road. Sidewalks, streetscape amenities, and a roundabout have recently been completed at the confluence of Oxford and North Decatur Roads in the Emory Village historic commercial district. The sidewalk network along North Decatur Road, east of Clairmont Road, is more varied with no sidewalks or a discontinuous sidewalk on one side of the road.

Bicycle Conditions

A marked bicycle lane is striped on Clifton Road between Briarcliff Road and North Decatur Road. Other major vehicular routes along the Clifton Corridor including North Decatur Road, Clairmont Road, and large portions of Briarcliff Road also contain bicycle routes. These streets, however, are characterized by higher volumes of vehicular traffic and higher vehicular travel speeds, lack of paved shoulders and commercial driveways and parking lots which create conflict for bicycle traffic. These are some of the factors which make bicycling difficult along these major corridor roadways. While Clifton Road contains marked bicycle lanes, the cycling environment along this road and other major roadways is typically not

as suitable as some of the lower traffic volume, local neighborhood routes within the Study Area. Local neighborhood bicycle routes which function as parallel routes to these major roadways include Old Briarcliff Road and Biltmore Drive (generally provides north-south access) as well as Peavine Creek Drive and Oxford Road (generally provides east-west access). Additionally, there is a striped bicycle lane which provides access to Campus Crossing, student residences, in the vicinity of the Sage Hill shopping center. There is also a striped path leading to athletic facilities fronting Peavine Creek Drive. However, in general, continuous bicycle lanes or shoulders are not common within the Study Area. There are also limited opportunities to expand using roadway right-of-way in the area.

The HHS/CDC offers secure bicycle parking, showers and lockers at the Roybal Campus for those employees who wish to use this mode of travel to commute to work.

Bike Emory is a bicycle commuter program that provides incentives for those who choose to cycle instead of driving to Emory University. Once registered for the program, enrollees receive an Occasional Parking Permit which allows program participants to park on campus in inclement weather. This program was established in 2007 and is a partnership between Emory University, Fuji Bikes, a bicycle manufacturer, and Bicycle South, a bicycle retailer near the Emory University campus. Program participants, including faculty, staff, and students are entitled to purchase Fuji equipment at deep discounts, have weekly bike repairs at a mobile center and participate in a bicycle sharing program.⁸⁸ This program has helped to encourage non-automotive travel modes and has also helped to reduce obstacles to cycling in the vicinity of Emory University.

Local Transit Facilities and Service

Currently, transit service within the Study Area is comprised of MARTA bus service. The CLIFF, provided by the CCTMA/Emory University, supplements the existing MARTA bus network by providing circulator service to Emory students as well as shuttle service to selected destinations within a three-mile buffer of the main Emory University Campus. As previously stated there is no commuter rail service within the Study Area. MARTA rail stations are all located beyond the Study Area limits with the closest stations situated at Lindbergh Center, Decatur, and Avondale, respectively.

MARTA Bus System Routes. MARTA operates approximately three bus routes within the Study Area as noted in Table 3.4-3 and summarized below.

⁸⁸ Emory University. *Transportation and Parking. Bicycling at Emory.*
<http://transportation.emory.edu/transportation/bike/index.html> (May 20, 2013).

Table 3.4-3: MARTA Bus Routes within Study Area

Route	Study Area Roadways	Points of Interest Served
6: Emory	Briarcliff Road, Clifton Road, North Decatur Road	Operates between Lindbergh & Inman Park Stations; HHS/CDC, Emory University/Emory Hospital, Wesley Woods Center, Children's at Egleston
19: Clairmont Road	Clairmont Road	Operates between Decatur & Chamblee Stations; Atlanta VA Medical Center
36: North Decatur Road/Virginia Highland	North Decatur Road	Operates between Avondale and Midtown Station; Emory University/Emory Hospital, Emory Village
16: Noble	Briarcliff Road, Johnson Road	Sage Hill Shopping Center; City of Atlanta - Carter Presidential Center, Atlanta Civic Center, Atlanta Medical Center
30: LaVista Road	Briarcliff Road (portions), LaVista Road	Operates between Northlake Mall & Lindbergh Station; Toco Hills Shopping Center

Source: MARTA Schedules and Maps <http://www.itsmarta.com/bus-routes-by-route.aspx>

Route 6 runs between Lindbergh Station and Inman Park and provides service to a number of well-established institutional uses found along Clifton Road such as Wesley Woods Center, HHS/CDC, Emory Hospital and University, and Children's at Egleston. This route traverses several Study Area roadways including LaVista Road, Clifton Road, Briarcliff Road and North Decatur Road. Bus stops include the intersections of Briarcliff and LaVista Roads and North Decatur and Clifton Roads.⁸⁹ In April 2013, MARTA implemented service modifications across its bus network including changes to Route 6. Service on Route 6 was revised to operate a short turn alignment from Lindbergh Station to the North Decatur Road and Oxford Road traffic circle. While the peak period service frequency was reduced from 18 minutes to 15 minutes, operation between Lindbergh Station and Inman Park was revised to occur via alternating trips (every 30 minutes) during the morning (6:00 AM to 9:00 AM) and afternoon (3:00 PM to 7:00 PM) weekday peak periods.⁹⁰ Route 6 would operate normally at midday and at night on weekdays as well as all day on the weekends.

Route 19 operates predominantly along Clairmont Road between Decatur Station and Chamblee Station. This bus route stops at the VA Medical Center and the intersection of Briarcliff Road and Clairmont Road within the Study Area. The Route 36 bus runs between the Midtown Station and Avondale Station in Decatur. A portion of this route operates along North Decatur Road with stops at Briarcliff and North Decatur Roads as well as Clairmont Road and North Decatur Roads. This route provides access to Emory University, Emory Hospital, Druid Hills High School and the DeKalb Medical Center. The Route 16 bus also operates within portions of the Study Area (Johnson Road; portions of Briarcliff Road) with the Route 30 bus operating along LaVista Road just beyond the Study Area limits.

Cliff Shuttle System. The Cliff shuttle system, named after Briarcliff and Clifton Roads, offers free regular service around the Emory University campus to nearby off-campus properties including downtown Decatur, the two Emory University Park-n-Ride lots and local businesses.⁹¹ Cliff provides shuttle service to a mix of Emory University main campus destinations. Cliff also provides service to Emory University's Clairmont and Briarcliff campuses, university hospital facilities, and shopping routes to local businesses. In addition, the shuttle fleet is alternatively-fueled and contains bicycle racks. In

⁸⁹ MARTA. *Schedules & Maps Route 6: Emory*. <http://itsmarta.com/6-w.aspx> (April 9, 2013).

⁹⁰ MARTA. *Marta Service Changes Effective April 20, 2013*. <http://www.itsmarta.com/service-changes-april20-2013.aspx> (May 3, 2013).

⁹¹ Emory Transportation and Parking Services. *Cliff Shuttles Route Map*. Revised July 2011.

total, there are over 20 shuttle routes, the majority of which provide connections between Woodruff Circle Transit Hub on Emory University's main campus on Clifton Road and other university affiliated entities. Other shuttle routes provide service to Clifton Corridor hospital facilities as well as local shopping centers. Cliff routes are identified in Table 3.4-4.

Table 3.4-4: Cliff Shuttle Routes

Route	Route Description	Selected Stop Locations	Service and Headways
Emory Campus Routes			
A	Stops along Clifton Rd. between Wesley Woods and Woodruff Circle	Emory Inn, Emory Point/CDC Pkwy. Crosswalk, Wesley Woods, Clifton Way, CDC across from 1599 Clifton Rd	M-F: 7a.m. to 7:50 p.m.; operates on 20 minute headways
B	Serves the Briarcliff Campus, Campus Crossing Apartments, and the Clifton Corridor to main campus and Emory Village	Briarcliff Campus, CDC, CDC Pkwy./Emory Point, N. Decatur Rd.	M-F: 7:15 a.m. to 12:30 a.m.; 15 minute headways until 9a.m., 30 minute headways between 9a.m. to 6:45 p.m., and 20 minute headways thereafter until 12:40 a.m.
C	Continuous services between the Clairmont Campus - Starvine Deck and Woodruff Circle	Emory Clinic, CHOA	M-F: 5:00 a.m. to 8:00 p.m.
D/DX	(D)Peavine Deck, Eagle Row, Woodruff Circle, Emory Hospital, Clifton Rd/(DX) btwn Peavine Deck and Woodruff Circle via Eagle Row only	Clifton Rd., Dowman Dr., Fishburne Dr.	(D) M-F: 5a.m. to 3p.m. (DX) M-F: 3:30a.m. to 8:00p.m. Approximately every 9 minutes
E	Clairmont Campus, Emory Clinics, Law School, and Lowergate parking decks	Starvine Way, Law School, Clifton Road between Gambrell and Uppergate Dr.	(D) M-F: 5a.m. to 9:10a.m./ 3:30 p.m. to 7:45 p.m.
M	Emory Clinics, Lowergate parking decks, Michael Street deck, Nursing School and Rollins Campus	Points along Clifton Rd.: at School of Nursing, Uppergate Dr., Haygood Drive	M-F: 5a.m. to 8p.m.

Route	Route Description	Selected Stop Locations	Service and Headways
Emory Campus Routes			
NightOwl	Late night service between various Emory properties	Clairmont Campus, Woodruff Circle, the main campus, Peavine Deck, Eagle Row and Michael Street Deck	M-TR: 20 minute headways 8p.m. to 12:30a.m., 30 minutes from 12:30 a.m. to 2 a.m. F: 10 minute headways 8 p.m. to 12:30a.m. - 1 every 30 minutes from 12:30AM-3 a.m. . Sat : every 30 minutes between 11 p.m. and 3a.m.
1525-VA*	Connects Clairmont Campus to the Student Health Center, and VA Medical Center on Clairmont Rd.	Starvine Deck, 1525 Clifton Rd., VA Medical Center	M-F: 7:45a.m. to 5:45p.m., departs Clairmont Campus every 35 minutes
Commuter Routes			
CCTMA	Operates between MARTA Decatur Station and Clifton Corridor (Emory Conference Center Hotel)	Stops along Clairmont Rd., N. Decatur Rd., Clifton Rd.	M-F: 5:30a.m. to 7:50p.m., varied departures every 15 to 30 minutes
Executive Park	Operates between Executive Park medical campus, Clifton Corridor and Emory University Campus	1525/1599 Clifton Rd., CDC Pkwy./Emory Point, Wesley Woods, Briarcliff Rd.	M-F: 7a.m. to 11a.m. and 3:45p.m. to 7:40p.m.
North DeKalb Mall Park & Ride	2050 Lawrenceville Hwy. to Woodruff Circle	Limited stops between point of origin and Woodruff Circle	<i>Regular weekday service. Pick-up point and parking outside the AMC Theater. A.M. travel time to Woodruff Circle 20 minutes, 25 minutes to reach mall from campus in p.m.</i>
South DeKalb Mall Park & Ride	2801 Candler Rd to Woodruff Circle	Limited stops between point origin and Woodruff Circle	<i>Parking for shuttle is located outside the Firestone Auto Center; 30 to 40 minutes in AM to Woodruff Circle; 35 to 40 minutes to mall in p.m.</i>
Route	Route Description	Selected Stop Locations	Service and Headways
Hospital Routes			
EUH Midtown	Service between Woodruff Circle and Emory Midtown	Uppergate Dr., Gambrell, Peachtree St.	Hourly weekday service from 6:10a.m. to 8:10p.m.
Grady	Service between Woodruff Circle and	Jesse Hill, Jr. Drive, Clifton Rd., Lowergate Deck	Hourly weekday service from 6:10a.m. to 6:40p.m.

	Grady Hospital		
Other Routes			
Oxford Campus	Service between Emory University's Druid Hills campus and Oxford College in Oxford, GA		Regular service during academic year. Trip is 1 to 1.5 hours in duration
Georgia Tech	Georgia Tech and Woodruff Circle	Ferst/Atlantic, Clifton/ Gatewood	Hourly weekday departures from GA Tech in Fall and Spring from 7:15a.m. to 6:15p.m.
Emory Experience	Shuttle to various sites in Atlanta	Destinations include Centennial Park, Atlantic Station, Atlanta Botanical Gardens	Planned weekend excursions
Yerkes	Service Between Yerkes Research Center and Woodruff Circle	1599 Clifton Rd, Rollins Center	M-F: 6:50a.m. to 5:50p.m., shuttles depart Yerkes at:10, :30, and :50 minutes past the hour
Shopping Shuttles	Various Locations	Publix at Emory Commons, Toco Hills Shopping Center, Lennox Square Mall	Combination of daily, afternoon, and weeknight service depending upon location

Source: Emory Transportation & Parking <http://transportation.emory.edu/transportation/cliff/index.html>

*Shuttle classified as both a Campus and Hospital Route

Cliff shuttle service that links or overlaps with MARTA bus service include: Cliff Route A (links with MARTA Route 6); 1525-VA (MARTA Route 19) and Route CCTMA which terminates at Decatur Station (similar to MARTA Route 19). This service is currently available to Emory University students, staff, and the general public. In the event that ridership increases in the future, Emory University may revise this policy relative to public access to the Cliff service. Additionally, future coordination between Cliff, MARTA, and ARC may occur in order to eliminate route redundancy and optimize the efficiency of both the Cliff shuttle and MARTA bus service.

Additionally, two Park-n-Ride facilities, one at the North DeKalb Mall (2050 Lawrenceville Highway, Decatur, GA) and the other at the South DeKalb Mall (2801 Chandler Road, Decatur, GA), are available to Emory University commuters. Cliff Park-n-Ride provides regular morning and afternoon shuttle service between the Woodruff Circle Transit Hub near the Emory University Hospital to the two Park-n-Ride locations. There are designated parking spaces at both malls which are monitored by mall security or Emory parking services.⁹²

Carpooling and Vanpools. Typically, carpooling is ideal for individuals who have limited access to mass transit and/or commute daily from long distances to places of employment or school. At the Roybal Campus, preferred carpool and vanpool parking is available for HHS/CDC employees. Carpool matching services are also available for HHS/CDC employees who wish to carpool. The HHS/CDC also participates in rideshare matching for carpools and vanpools through ARC in the Atlanta region as well as other MPOs and municipalities across the nation.

⁹² Emory University. *Transportation & Parking*. <http://transportation.emory.edu/transportation/cliff/PnR.html> (April 5, 2013).

Additionally, Emory University has a carpooling program which is designed to reduce parking demand at the Emory Clifton Road campus and help to lessen traffic congestion in the Clifton Corridor. Emory University offers incentives and helps staff and students obtain ride matching lists.⁹³

Similarly, vanpools are a relatively cost-effective commuting option for commuters that have similar work schedules and live and work in the same areas. Vanpools typically consist of seven to 15 commuters that share a ride in a leased van. Benefits to this type of arrangement are two-fold. Environmental benefits include reducing the number of vehicles on the road and their associated emissions. Economic benefits include reduced commuter-related expenses since members share expenses such as gas and other costs. In addition, Emory offers free parking for designated vanpool vehicles.⁹⁴

Fare Share. As previously mentioned, a number of HHS/CDC facilities across the country participate in the Fare Share program. In Washington, DC approximately 72 percent of employees were enrolled in the program and almost all used mass transit. At the Roybal Campus approximately 15.6 percent of the campus population was enrolled in the Fare Share program with 76 percent of participants using vanpools and 24 percent using mass transit.

⁹³ Emory University. Transportation & Parking. Carpooling at Emory.
<http://transportation.emory.edu/transportation/carpool/index.html> (May 20, 2013).

⁹⁴ Emory University. Transportation & Parking. Vanpool Program at Emory.
<http://transportation.emory.edu/transportation/vanpool/index.html> (May 20, 2013).

3.4.2 Environmental Consequences

No Action Alternative

The analysis of future conditions without the Preferred Alternative serves as the baseline against which the impacts of the Preferred Alternative would be compared. The No Action Alternative analysis (future without the proposed Master Plan improvements) includes background traffic volume increases to reflect expected growth in overall travel through and within the area, major real estate developments, institutional expansions, and physical and operational roadway system changes scheduled to be occupied or implemented by the Build Year 2025. For growth and improvements related to major developments and infrastructure improvements, only approved or funded projects, and projects specifically identified by local agencies and/or developers as likely to be implemented or constructed were included in the analysis. These agencies and developers include Emory University, Cousin's Property (Emory Point), the VA Medical Center, DeKalb County, ARC, and GDOT. In addition, annual background growth rates ranging from 0.5 to 1.25 percent were assumed on Study Area roadways based on information provided by ARC (Refer to Table 3.4-5).⁹⁵ A summary of projects and improvements as well as justification for their inclusion are detailed below.

Table 3.4-5: Annual Background Growth Rates (Year 2012-2025)

Annual Growth Rates on Study Area Roadways	
Briarcliff Rd	0.50%
Clifton Rd	0.75%
N Decatur Rd	1.25%
Mason Mill	0.50%
Haygood Rd	0.75%
N Druid Hills Rd	1.00%
Clairmont Rd	1.00%
LaVista Rd	0.75%
Houston Mill Rd	0.50%

Source: ARC Travel Demand Model Plan 2040

No Action Alternative Projects

Background projects within the Study Area, detailed below, were considered in the No Action Alternative transportation analysis. When determining if a project or development is appropriate for inclusion in the No Action Alternative analysis, the following criteria were considered:

- Funding for project has been identified
- Project is contained in the short-term work program of the municipality
- Project is contained in the TIP

⁹⁵ ARC Travel Demand Model Plan 2040

- Project is completed by the build out of the Master Plan
- Sufficient information is available
- Recommendation of inclusion by local agency

The following is a description of projects and/or developments that were included in the No Action Alternative analysis.

Emory Point. This development, fronting Clifton Road, is a three phase mixed-use project located on approximately 50 acres across the street from the Roybal Campus. Construction of Phase I was completed in 2012 which consisted of 443 residential apartments and approximately 80,000 gsf of retail space. Phase I also includes 950 parking spaces. Actual vehicle trips assigned to Emory Point are based on the approved DRI that was conducted for the project. The original DRI included the Emory Point development, an expansion to the Emory Conference Center Hotel and an additional parking deck for office building at 1599 Clifton Road.^{96,97}

Construction of Phase II is anticipated to commence in summer of 2013 with completion expected by winter of 2014. Phase II components are expected to include approximately 43,000 gsf of retail space, a 600 space parking deck, and 300 residential apartment units. The final build out of Phase III is subject to change based on market conditions. However, Phase III is zoned for 200 additional apartments, minimal retail space, and no more than 300 parking spaces.⁹⁸

Roadway striping and other improvements have already been implemented at Emory Point. The installation of some traffic signals is not completed and/or operational however, for analysis purposes, traffic signals were assumed to be fully operational by the No Action Alternative build year. A bicycle lane that spans the length of the Emory Point parcel has been constructed as part of the Emory Point development. Table 3.4-6 details the projected number of vehicle trips resulting from the Emory Point project as outlined and analyzed in the DRI analysis performed for the development.

Table 3.4-6: Emory Point Trip Generation

Emory Point Gross Trip Generation						
Land Use	Daily Traffic		AM Peak Hour		PM Peak Hour	
466 Apartment Dwelling Units	1476	1476	46	186	178	96
406 Condo/Townhouse Units	1056	105	27	131	127	63
200 Hotel Rooms	708	708	59	38	63	55
121,103 SF Retail	3846	3846	107	69	341	369
	7086	6135	239	424	709	583

Source: Atlanta Regional Commission. Development of Regional Impact Review Report: Clifton Road Mixed Use Development. April 28, 2007.

Emory University Hospital. The Emory Healthcare Druids Hills Expansion DRI, which was approved in 2008, proposed the construction of 395,000 gsf of clinic space and 525,000 gsf (250 beds) of hospital space on approximately 19 acres along Clifton Road across the street from the existing Emory University

⁹⁶ Atlanta Regional Commission. *Development of Regional Impact Review Report: Clifton Road Mixed Use Development*. April 28, 2007. p.1

⁹⁷ Original Emory Point development plans, as analyzed in the DRI, called for a total of 872 residential units, 121,000 gsf of retail space, 223,000 sf of hotel space, and a total of 2,690 parking spaces.

⁹⁸ Telephone conversation with Jason Frost, Cousins Properties. March 26, 2013.

Hospital.⁹⁹ The proposed expansion also included 1,400 new parking spaces for the hospital and clinic. In addition, 1,200 parking spaces would be added to the existing parking deck at Clairmont Campus. Since the approval of the DRI in 2008, the scale of the project has been reduced from what was initially analyzed in the approved DRI. Accordingly, the inclusion of this project in the No Action Alternative analysis reflects a lesser magnitude of development than what was originally considered as Emory University officials indicated that full buildout of this project is not anticipated by the 2025 Build Year.¹⁰⁰

Currently the proposed expansion involves a new nine-story, 210-bed hospital addition on the corner of Clifton Road and Gambrell Drive. The addition would provide new operating rooms, intensive care unit rooms and private patient rooms (net gain of 128 beds for Emory University Hospital). Two parking decks consisting of 900 and 500 spaces, or a total of 858 net new parking spaces have been reduced to approximately 500 parking spaces (See Table 3.4-7 below). For the purposes of this traffic analysis, the traffic distribution in the original DRI approved for this project was assumed; however the number of vehicle trips was reduced proportionally to account for the smaller parking structure.

Table 3.4-7: Emory University Hospital Trip Generation

Parking Deck Location	Original DRI Net Increase in Parking capacity	Current Planned Parking Deck Capacity	Reduction
Clinic (below grade)	858	-	58%
Hospital (below grade)		500	
Clairmont Deck Expansion*	1,200	696	

*Since this project is in the planning stages, parking capacity has yet to be finalized. For analysis purposes, the number of net new spaces provided at the Clairmont Campus was assumed to be reduced proportionally with the reduction identified for the Clinic and Hospital parking facilities.

Atlanta VA Medical Center. Additional parking constructed for the VA Medical Center campus in early 2013 would result in a net gain of approximately 230 parking spaces was included in the No Action Alternative scenario. Since no detailed traffic study that contained trip generation/distribution information for this parking facility was available, vehicle trips volume projections were based on vehicle trip estimates of a typical parking garage in the area. The distribution was based on existing background traffic patterns. In addition, parking projects planned for the campus (anticipated for construction 2016-2017) would result in a net gain of approximately 500 parking spaces. A new research building is also proposed on the VA Medical Center Campus. However, this project was not included as it is still pending funding and federal approvals. If constructed this project would result in a loss of approximately 130 parking spaces.¹⁰¹

Intersection of Clifton Road and North Decatur Road. This intersection would be reconfigured to allow for an exclusive right-turn lane from Clifton Road to North Decatur Road as identified in a Clifton Corridor concept drawing provided by Emory University. However, Emory University has requested that DeKalb County investigate the feasibility of limiting the improvement to restriping the southbound approach of Clifton Road. For the purposes of the future No Action Alternative, improvements included in the concept drawing which included the exclusive right turn lane were assumed to be implemented.

⁹⁹ Atlanta Regional Commission. Development of Regional Impact Review Report: Emory Healthcare Druid Hills Expansion. September 2, 2008. p.1

¹⁰⁰ Personal Communication with Jen Fabrick, Emory University. April 3, 2013.

¹⁰¹ Correspondence between Jacobs and KC Carlson, Atlanta VA Medical Center. April 30, 2013.

Intersection of Briarcliff Road and LaVista Road (ARC DK-274). Currently, operations at this intersection are among the worst in DeKalb County. Although this project is not official, DeKalb County has developed several preliminary conceptual schematics that would upgrade intersection operations. As such, while not approved, DeKalb County has recommended its inclusion in the No Action Alternative scenario as it is likely that an improvement would be in place prior to the implementation of the Preferred Alternative.¹⁰² This intersection would be upgraded under a different project, including adding turn lanes, through lanes, and signal timing improvements.

Signal Optimization Projects (Various Locations). Several signal upgrade and optimization projects are either planned or currently being instituted in and around the Study Area. However, for the purposes of this analysis, signals operating in their existing condition were assumed as these studies have not been completed to date.

Trip Generation and Assignment

Trip generation and assignment for the future No Action Alternative was estimated using information provided in recent relevant traffic studies as well as information provided by the various agencies and developers, as previously discussed. The vehicular distribution for the various No Action Alternative projects was based on their respective traffic studies if available, otherwise the distribution was based on the existing background traffic. Additionally, approved roadway improvements including intersection improvements at Briarcliff Road and LaVista Road and at North Decatur Road and Clifton Road were included in the analysis.

Traffic Conditions

Based on the annual growth rates provided by ARC and future No Action Alternative trip generation resulting from the various projects previously discussed, there would be a significant increase in traffic volumes expected along the streets and on major intersections within the Study Area.

For example, North Decatur Road could experience an increase in traffic of up to 500 vehicles in both directions on certain segments during the AM and PM Peak hours, particularly around the intersection of North Decatur and Clairmont Road. Similarly, Clairmont Road is projected to experience significantly higher traffic volumes in both directions within the Study Area. Clifton Road proximate to the HHS/CDC main gate experiences an increase of up to 450 vehicles in the AM and PM peak hours primarily due to growth associated with the Emory Point development. Conversely, Houston Mill Road, south of Clifton Road is not expected to experience a significant increase in traffic as it is somewhat isolated from the major No Action Alternative developments in the Study Area. Figure 3.4-5: Traffic Volumes No Action Alternative AM and Figure 3.4-6: Traffic Volumes No Action Alternative PM illustrate weekday traffic volumes for the No Action Alternative during the AM and PM peak hours.

¹⁰² Personal Communication with Patrece Keeter, DeKalb County Transportation Division. April 2, 2013.

Figure 3.4-5: Traffic Volumes No Action Alternative AM

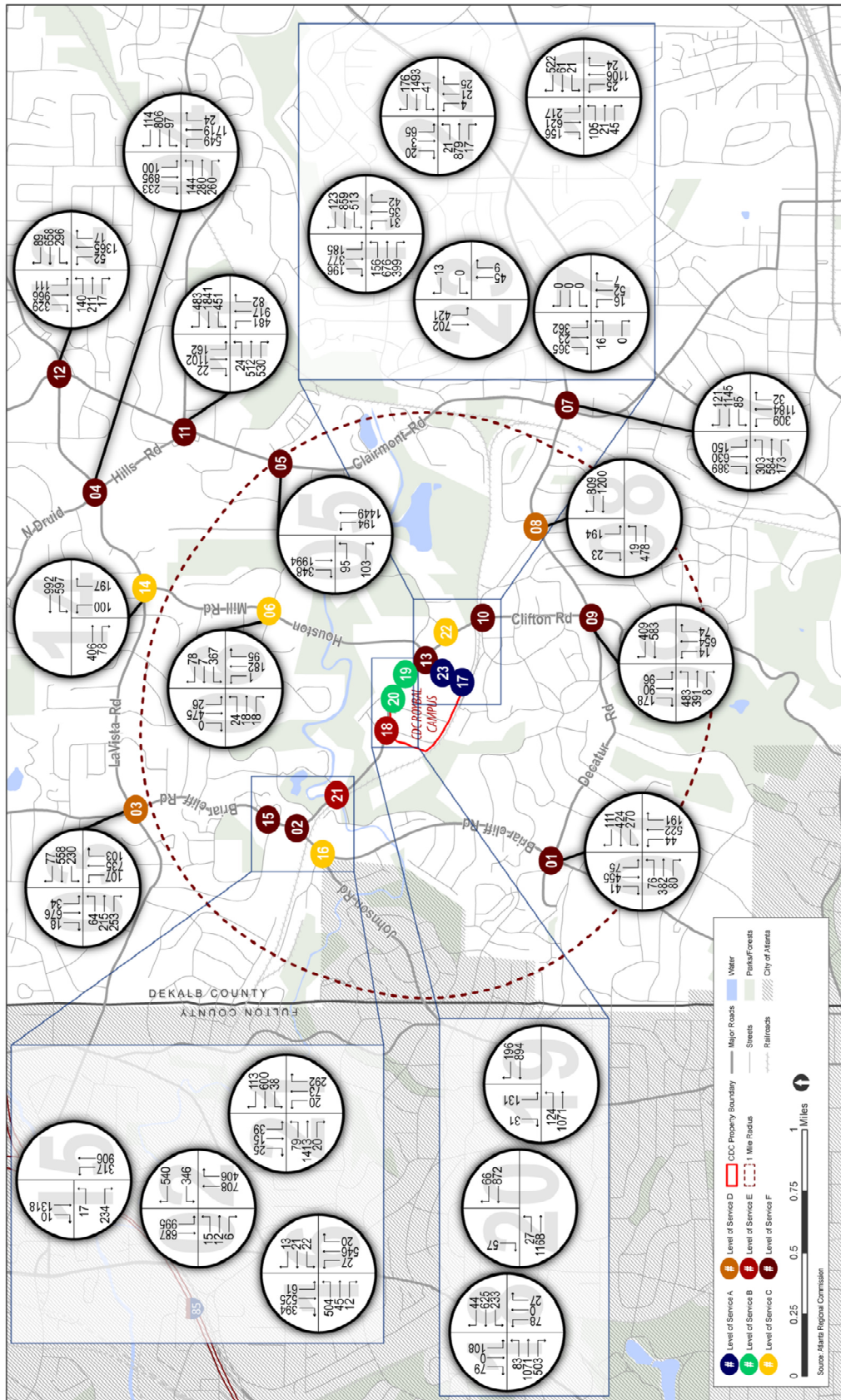
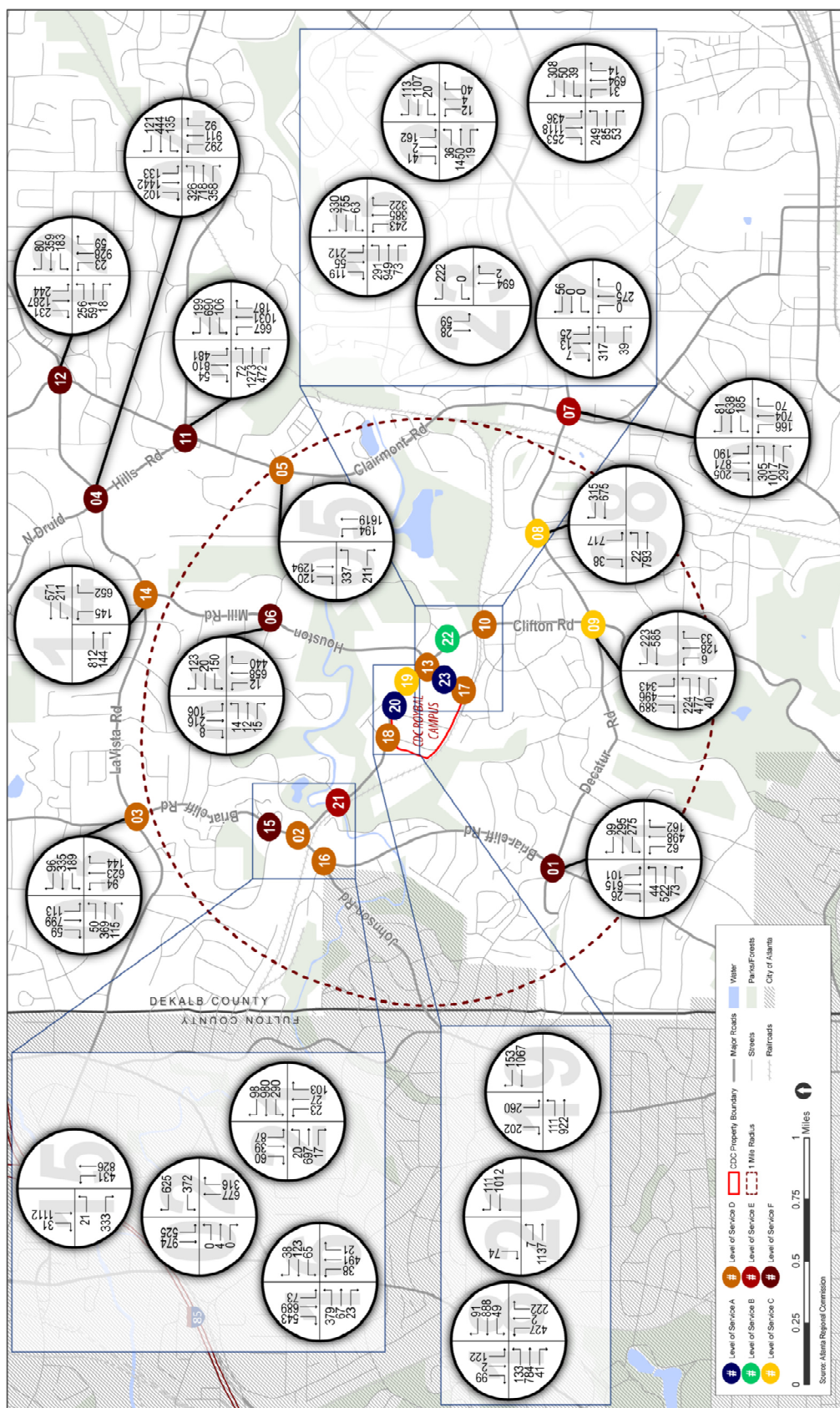


Figure 3.4-6: Traffic Volumes No Action Alternative PM



Future No Action Alternative LOS operations were determined based on the projected future 2025 traffic volumes identified in Figures 3.4-5 and 3.4-6. Traffic conditions at intersections operating poorly under existing conditions are expected to worsen with increased congestion and delays (See Existing Conditions – Existing Conditions LOS Results). In addition, several intersections not previously considered to be operating at an unacceptable LOS are projected to deteriorate to overall intersection LOS E or worse (Refer to Table 3.4-8). These intersections include:

Clifton Road/Old Briarcliff Road (overall intersection LOS E during AM and PM peak hour) experiences heavy delays, particularly on the northbound and southbound approaches during the AM peak hour. During the PM peak hour, the eastbound and westbound approaches of Clifton Road operate with significant delays.

Clifton Road/HHS/CDC Main Entrance (overall intersection LOS E during the AM peak hour) experiences a significant increase in delay, particularly during the AM peak period. Excessive delays are projected for vehicles exiting the Emory Point driveway and making left turns into Emory Point during the AM peak hour. These conditions continue to occur even with signal optimization which was assumed to occur under the Emory Point Project.

Clifton Road/Haygood Drive (overall intersection LOS F during the PM peak hour) experiences unacceptable delay on the northbound and southbound Clifton Road approaches.

Houston Mill Road/Mason Mill Road (overall intersection LOS F during the PM peak hour) experiences long delays in the northbound direction, primarily due to the increased traffic leaving the Study Area. Due to limited right-of-way, and only a single lane available to all approaches, little opportunity to improve traffic conditions at this residential intersection location.

No Action Alternative Traffic Improvements

Several traffic study intersections are projected to improve under the future No Action Alternative condition as a result of improvements previously identified (refer to No Action Alternative Projects). These intersections include:

Clifton Road/Emory Inn driveway continues to operate at acceptable LOS B or better with increased traffic volumes expected from Emory Point. Intersection signalization is expected to be implemented under the Emory Point development.

Briarcliff Road/LaVista Road is projected to operate with improved LOS conditions and shortened delays as a result of the improvement proposed by DeKalb County. Although there are increased traffic volumes at the intersection, the added turn and through lanes contribute to reducing LOS operations from an LOS E in Existing Conditions to an acceptable LOS D in the AM and PM peak hours.

Improvements proposed under the Emory University Hospital DRI at the intersection of Clifton Road and North Decatur Road are expected to increase capacity along the southbound approach. However, due to projected future traffic volume increases at this location, LOS operations are still expected to deteriorate to LOS F during the AM peak hour. During the PM peak hour, however, LOS operations are expected to improve from LOS D to C due to the intersection improvement.

Table 3.4-8: No Action Alternative LOS Operations

No Action Alternative LOS Operations								
INTERSECTION & APPROACH	Mvt.	Weekday Peak Hour						
		AM			PM			
		V/C	Control Delay	LOS	V/C	Control Delay	LOS	
Signalized								
Clifton Road at Briarcliff Road								
Driveway	EB	LTR	0.23	46.3	D	0.01	34.5	C
Clifton Road	WB	LT	1.41	245.9	F	0.94	79.7	E
		R	0.83	19.9	B	0.86	27.1	C
Briarcliff Road	NB	LT	0.82	71.3	E	0.78	60.1	E
		R	0.63	27.1	C	0.55	16.0	B
	SB	L	1.25	151.5	F	0.99	69.7	E
		TR	0.31	6.2	A	0.49	18.8	B
Overall Intersection	-		1.41	85.0	F	0.99	42.5	D
Clifton Road at Old Briarcliff Road								
Clifton Road	EB	LTR	0.72	10.6	B	0.56	37.4	D
	WB	LTR	0.41	4.2	A	1.16	158.0	F
Old Briarcliff Road	NB	LTR	1.48	263.9	F	1.09	70.7	E
Towers Circle	SB	LTR	1.55	333.4	F	0.37	5.6	A
Overall Intersection	-		1.55	62.2	E	1.16	56.6	E
Clifton Road at HHS/CDC Entrance								
Clifton Road	EB	LTR	1.05	49.2	D	0.92	53.0	D
	WB	L	1.16	160.5	F	0.22	7.0	A
		TR	0.28	2.8	A	0.52	10.6	B
HHS/CDC Entrance	NB	L	0.26	51.8	D	0.90	75.5	E
		LTR	0.19	4.5	A	0.91	77.4	E
		R	0.08	0.5	A	0.42	13.0	B
Driveway	SB	LTR	1.20	155.4	F	1.01	98.3	F
Overall Intersection	-		1.20	57.5	E	1.01	42.6	D
Clifton Road at Emory Inn								
Clifton Road	EB	LT	0.68	14.9	B	0.50	9.2	A
	WB	TR	0.46	14.4	B	0.47	7.0	A
Emory Inn	SB	LR	0.13	0.5	A	0.21	1.2	A
Overall Intersection	-		0.68	14.4	B	0.50	8.4	A
Clifton Road at Emory Conference Center								
Clifton Road	EB	L	0.36	7.2	A	0.46	15.4	B
		T	0.48	7.0	A	0.45	12.5	B
	WB	T	0.46	13.0	B	0.66	24.4	C
		R	0.25	5.0	A	0.24	10.2	B
Emory Conference Center	SB	L	0.72	64.0	E	0.85	58.6	E
		R	0.16	13.2	B	0.54	15.9	B
Overall Intersection	-		0.72	13.0	B	0.85	23.3	C
Clifton Road at Houston Mill Road								
Clifton Road	EB	L	0.70	37.7	D	0.88	57.6	E
		TR	1.56	289.6	F	0.81	41.7	D
	WB	L	1.16	117.4	F	0.39	37.3	D
		T	0.70	23.0	C	0.82	71.4	E
		R	0.19	3.0	A	0.64	47.1	D
Houston Mill Road	NB	L	0.30	32.4	C	0.57	30.6	C
		T	0.13	42.3	D	0.92	74.5	E
		R	0.12	0.5	A	0.66	23.4	C
	SB	L	0.35	28.4	C	0.82	54.5	D
		TR	0.98	72.0	E	0.42	28.0	C
Overall Intersection	-		1.56	129.0	F	0.92	51.9	D
Clifton Road at Gatewood Road								
Clifton Road	EB	L	0.13	14.6	B	0.15	3.0	A
		TR	0.41	32.2	C	0.67	15.7	B

No Action Alternative LOS Operations									
INTERSECTION & APPROACH		Mvt.	Weekday Peak Hour						
			AM			PM			
			V/C	Control Delay	LOS	V/C	Control Delay	LOS	
Driveway Gatewood Road	WB	L	0.11	3.2	A	0.11	5.5	A	
		TR	0.72	8.9	A	0.60	9.1	A	
	NB	LTR	0.32	31.3	C	0.21	18.6	B	
	SB	LTR	0.73	72.4	E	0.92	88.1	F	
	Overall Intersection	-	0.73	20.7	C	0.92	18.9	B	
Clifton Road at Haygood Road Clifton Road	SB	L	1.14	154.9	F	1.02	94.8	F	
		TR	0.74	23.3	C	0.95	40.5	D	
	NB	L	0.15	17.0	B	0.24	24.0	C	
		TR	1.37	200.9	F	0.88	53.2	D	
	Asbury Circle	EB	L	0.90	83.0	F	0.94	73.9	E
Haygood Drive	WB	TR	0.11	8.0	A	0.26	22.6	C	
		L	0.06	26.3	C	0.23	45.9	D	
		TR	1.01	65.3	E	0.90	47.0	D	
	Overall Intersection	-	1.37	114.2	F	1.02	52.7	D	
	Houston Mill Road at Mason Mill Road Houston Mill Road	NB	LTR	0.38	16.4	B	1.23	134.0	F
LTR			0.64	24.1	C	0.76	26.9	C	
Mason Mill Road		EB	LTR	0.12	15.6	B	0.11	18.8	B
		WB	LTR	0.95	61.5	E	0.82	46.0	D
Overall Intersection		-	0.95	34.3	C	1.23	98.5	F	
Briarcliff Road at LaVista Road Briarcliff Road	NB	L	0.17	15.4	B	0.20	20.6	B	
		T	0.47	28.5	C	0.47	36.7	D	
		R	0.13	6.0	A	0.22	13.3	B	
	SB	L	0.07	17.0	B	0.21	17.7	B	
		T	0.44	28.5	C	0.52	30.8	C	
		R	0.02	0.1	A	0.08	0.2	A	
	LaVista Road	EB	L	0.42	40.4	D	0.23	33.3	C
		TR	0.84	52.6	D	0.90	77.5	E	
	WB	L	0.78	39.1	D	0.65	49.5	D	
		TR	0.80	47.1	D	0.52	50.3	D	
	Overall Intersection	-	0.84	35.5	D	0.90	40.7	D	
	LaVista Road at Houston Mill Road LaVista Road	EB	TR	0.50	40.6	D	1.02	73.7	E
			L	0.77	17.0	B	0.63	45.1	D
Houston Mill Road		TR	0.66	16.9	B	0.44	7.4	A	
		NB	L	0.65	81.4	F	0.72	79.8	E
Overall Intersection		-	0.77	23.3	C	1.02	37.9	D	
LaVista Road at N Druid Hills Road LaVista Road	EB	L	0.48	23.3	C	0.73	45.6	D	
		T	0.17	24.2	C	0.47	43.4	D	
		R	0.30	10.4	B	0.46	27.2	C	
	WB	L	0.16	19.0	B	0.41	22.0	C	
		T	0.47	35.4	D	0.29	30.5	C	
		R	0.14	11.7	B	0.16	11.2	B	
	N Druid Hills Road	NB	L	4.35	Error	F	1.49	257.7	F
		TR	2.34	628.9	F	1.23	160.4	F	
	SB	L	0.83	84.0	F	0.94	100.8	F	
		TR	1.72	364.2	F	2.10	527.9	F	
	Overall Intersection	-	4.35	451.9	F	2.10	219.9	F	
	LaVista Road at Clairmont Road LaVista Road	EB	L	0.68	67.9	E	0.90	81.0	F

No Action Alternative LOS Operations											
INTERSECTION & APPROACH			Mvt.	Weekday Peak Hour							
				AM			PM				
				V/C	Control Delay	LOS	V/C	Control Delay	LOS		
Clairmont Road	WB	TR	0.33	15.9	B	0.95	61.5	E			
		L	0.67	36.5	D	0.94	87.0	F			
		TR	1.21	146.9	F	0.75	50.4	D			
		L	0.40	36.2	D	0.11	43.4	D			
	NB	TR	1.36	192.3	F	0.84	80.0	E			
		L	0.77	62.2	E	1.23	172.5	F			
	SB	TR	1.19	135.7	F	1.33	191.3	F			
		-	1.36	137.3	F	1.33	120.0	F			
Overall Intersection			-	1.36	137.3	F	1.33	120.0	F		
Clairmont Road at N Druid Hills Road											
Clairmont Road	SB	L	0.24	29.9	C	2.49	693.6	F			
		TR	0.84	35.3	D	1.06	110.3	F			
		L	1.76	392.8	F	1.99	476.9	F			
		TR	1.13	106.2	F	1.29	180.2	F			
	NB	L	0.11	27.8	C	0.22	6.8	A			
		T	0.52	31.3	C	0.87	37.5	D			
	EB	R	0.92	32.5	C	0.57	20.9	C			
		L	1.63	326.9	F	0.58	37.2	D			
N Druid Hills Road	WB	T	2.12	534.4	F	0.47	30.8	C			
		R	0.82	35.9	D	0.26	3.9	A			
		-	2.12	229.0	F	2.49	176.8	F			
		Overall Intersection			-	2.12	229.0	F	2.49	176.8	F
	Clairmont Road at Mason Mill Road										
	Clairmont Road	SB	TR	1.36	198.4	F	0.99	46.1	D		
			L	0.76	74.6	E	0.82	65.9	E		
			T	0.66	9.0	A	0.82	22.4	C		
LR			0.59	49.8	D	1.01	86.2	F			
NB		LR	0.59	49.8	D	1.01	86.2	F			
		-	1.36	117.6	F	1.01	48.7	D			
Overall Intersection			-	1.36	117.6	F	1.01	48.7	D		
Mason Mill Road											
Clairmont Road at N Decatur Road	SB	L	0.95	113.7	F	0.72	57.7	E			
		TR	1.22	133.7	F	1.08	108.4	F			
		L	1.21	161.8	F	1.22	181.8	F			
		T	1.28	174.5	F	0.91	73.0	E			
	NB	R	0.06	0.2	A	0.14	0.6	A			
		L	1.35	215.2	F	0.79	47.5	D			
	EB	TR	0.58	30.0	C	0.89	50.5	D			
		L	0.36	24.3	C	1.20	167.9	F			
N Decatur Road	WB	TR	1.15	120.9	F	0.60	41.5	D			
		-	1.35	128.8	F	1.22	74.4	E			
		Overall Intersection			-	1.35	128.8	F	1.22	74.4	E
		N Decatur Road at Haygood Road									
	N Decatur Road	WB	TR	1.01	44.6	D	0.51	9.8	A		
			LT	0.34	11.1	B	0.48	16.0	B		
			LR	0.30	45.6	D	0.85	57.9	E		
			-	1.01	38.8	D	0.85	25.9	C		
NB		LR	0.30	45.6	D	0.85	57.9	E			
		-	1.01	38.8	D	0.85	25.9	C			
Overall Intersection			-	1.01	38.8	D	0.85	25.9	C		
Haygood Road											
N Decatur Road at Clifton Road	WB	LT	1.05	90.7	F	0.83	44.1	D			
		R	0.75	35.7	D	0.32	7.1	A			
		L	1.23	157.0	F	0.84	44.8	D			
		TR	0.21	11.5	B	0.28	14.4	B			
	EB	L	1.45	297.6	F	0.77	39.5	D			
		T	0.21	7.6	A	0.94	39.3	D			
	SB	R	0.36	1.8	A	0.66	11.8	B			
		L	1.16	130.4	F	0.50	52.9	D			
Clifton Road	NB	L	1.45	297.6	F	0.77	39.5	D			
		T	0.21	7.6	A	0.94	39.3	D			
		R	0.36	1.8	A	0.66	11.8	B			
		L	1.16	130.4	F	0.50	52.9	D			
	WB	L	1.38	228.6	F	1.40	237.8	F			
		-	1.45	91.6	F	0.94	31.2	C			
	Overall Intersection			-	1.45	91.6	F	0.94	31.2	C	
	N Decatur Road at Briarcliff Road										
N Decatur Road	WB	L	1.38	228.6	F	1.40	237.8	F			
		L	1.38	228.6	F	1.40	237.8	F			

No Action Alternative LOS Operations								
INTERSECTION & APPROACH		Mvt.	Weekday Peak Hour					
			AM			PM		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Briarcliff Road	EB	TR	0.94	72.2	E	0.70	48.5	D
		L	0.69	54.8	D	0.17	26.2	C
		TR	1.04	98.5	F	1.11	119.3	F
	NB	L	0.22	22.4	C	0.42	30.2	C
		TR	1.12	111.5	F	1.02	83.9	F
		L	0.66	74.6	E	0.68	78.7	E
	SB	TR	0.73	25.9	C	0.96	71.8	E
		L	0.66	74.6	E	0.68	78.7	E
		TR	0.73	25.9	C	0.96	71.8	E
	Overall Intersection	-	1.38	92.4	F	1.40	96.9	F
N Decatur Road at Johnson Road N Decatur Road	NB	L	0.07	14.9	B	0.24	29.8	C
		TR	0.30	14.1	B	0.47	28.2	C
		L	0.16	13.5	B	0.34	42.3	D
	SB	T	0.28	12.8	B	0.49	42.0	D
		R	0.40	3.0	A	0.62	20.0	B
		L	0.88	83.3	F	0.55	50.2	D
	EB	TR	0.86	80.5	F	0.55	49.1	D
		LTR	0.53	72.2	E	1.02	114.7	F
		L	0.88	83.3	F	0.55	50.2	D
	Overall Intersection	-	0.88	29.8	C	1.02	43.7	D
Unsignalized								
Briarcliff Road at Shepards Lane Briarcliff Road	NB	L	1.90	472.6	F	1.06	88.3	F
		T	0.55	0.0	A	0.63	0.0	A
		TR	0.80	0.0	A	0.69	0.0	A
	SB	TR	0.80	0.0	A	0.69	0.0	A
		LR	-	-	F	-	-	F
Shepards Lane	EB	LR	-	-	F	-	-	F
		L	-	-	F	-	-	F
		TR	-	-	F	-	-	F
	Overall Intersection	-	-	-	F	-	-	F
		-	-	-	F	-	-	F
Houston Mill Road at Rollins Way Houston Mill Road	SB	LT	0.30	3.0	A	0.10	3.0	A
		TR	0.03	0.0	A	0.32	0.0	A
		LR	0.02	8.6	A	0.47	16.1	C
	Overall Intersection	-	0.30	3.6	A	0.47	4.4	A
		-	0.30	3.6	A	0.47	4.4	A
Houston Mill Road at HHS/CDC Driveway Houston Mill Road	SB	LT	0.26	2.1	A	0.20	5.3	A
		R	0.23	7.8	A	0.00	0.0	A
		TR	0.02	1.9	A	0.00	0.0	A
	Overall Intersection	-	0.26	4.4	A	0.20	5.3	A
		-	0.26	4.4	A	0.20	5.3	A
HHS/CDC Driveway	EB	L	0.14	26.2	D	0.92	57.3	E
		R	0.00	0.0	A	0.04	8.5	A
		LTR	0.00	0.0	A	0.13	10.8	B
	Overall Intersection	-	0.26	4.4	A	0.92	26.1	D
		-	0.26	4.4	A	0.92	26.1	D
Garage	WB	L	0.14	26.2	D	0.92	57.3	E
		R	0.00	0.0	A	0.04	8.5	A
		LTR	0.00	0.0	A	0.13	10.8	B
	Overall Intersection	-	0.26	4.4	A	0.92	26.1	D
		-	0.26	4.4	A	0.92	26.1	D

Parking

Under the No Action Alternative, the implementation of the Master Plan would not occur. Approximately 865 new employees would be introduced to the Roybal Campus under the No Action Alternative. This future growth at the Roybal Campus would be accommodated within existing office, laboratory and support space contained within the Roybal Campus. Parking demand would be anticipated to increase proportionally with the resultant employee growth without the Master Plan in place. There would be no construction of additional parking under the No Action Alternative and total on-campus parking would remain at the current parking cap of 3,300 spaces. As campus parking is currently at capacity, under the No Action Alternative sufficient parking to accommodate future background growth would be unavailable on the Roybal Campus. In addition, nearby off-campus parking would not likely be available to HHS/CDC employees, in keeping with current trends.

Additional parking facilities are expected to be constructed by Emory Hospital and VA Medical Center as previously discussed. For purposes of this analysis, however it is assumed that additional parking capacity resulting from these projects would not be available for HHS/CDC employee use.

Pedestrian and Bicycle Conditions

Pedestrian activity in the Study Area was assumed to increase proportionally to the growth in the Study Area's traffic (see Table 3.4-5). Field observations indicate a minimal amount of pedestrian activity on the Roybal Campus and within the Study Area. Overall, pedestrian elements within the Study Area are well under capacity based on field observations. Since no significant changes to the Study Area's pedestrian infrastructure are expected, it was assumed that the mode split would remain largely similar to existing conditions. As a result, significant changes in Study Area pedestrian conditions are not anticipated under the No Action Alternative.

Pedestrian activity may increase a nominal amount under the No Action Alternative, with the completion of Emory Point. The impetus to develop Emory Point, in part, was to construct a local mixed-use cluster that would attract and allow for the retention of individuals within the Study Area. Emory Point is anticipated to promote non-automobile usage such as walking and biking. Pedestrian concentrations at Emory University are also anticipated to remain more robust as the student population typically uses walking as a travel mode and also has easier access to local Cliff shuttle bus routes via the Emory University Campus.

As part of the Emory University Hospital redevelopment, a bicycle lane would be installed near the southbound approach of Clifton Road and North Decatur Road. The Build Year for the Hospital is 2017.

This project along with the existing shared bike lane constructed as part of Emory Point would help to fortify the bicycle network within the Clifton Corridor by providing improved accessibility and better connectivity between Emory University Hospital and Emory Point.

Local Transit Facilities and Services

Public transit activity and the utilization of non-single occupancy vehicle modes of travel to the Roybal Campus was assumed to increase proportionally to the growth in the Study Area's traffic (see Table 3.4-5). Survey data provided by the HHS/CDC indicate that the majority of the campus population travels to

the Roybal Campus via automobile (approximately 88 percent) with only 12 percent of the total campus population (or 17 percent of the total trips during the day of survey) using alternative modes of travel (i.e., cycling, walking, mass transit, carpool/vanpool). Under the No Action Alternative local transit services are anticipated to remain similar to existing conditions.

A significant change in mode split is not expected with single occupancy vehicle continuing to be the preferred travel mode. There are no large-scale mass transit projects that are funded that would change travel options in the Clifton Corridor. In addition, Emory University has indicated that Cliff shuttle service is approaching capacity. The priority for Cliff service is for Emory University staff, students and faculty and if capacity becomes an issue in the future this service may be closed off to the non-Emory University public. As a result, significant changes in local transit service conditions are not anticipated under the No Action Alternative.

Future coordination between Cliff, MARTA, and ARC may occur in order to eliminate route redundancy and optimize the efficiency of both the Cliff shuttle and MARTA bus service.

Preferred Alternative

The analysis of the future condition with the Master Plan in place involves the determination of the volume of trips by travel mode expected to be generated by the Preferred Alternative, the assignment of these vehicle trips to the street network approaching the Roybal Campus, and the determination of projected LOS at the critical locations analyzed. Based on a survey conducted by the HHS/CDC for the fiscal year 2012, a majority of employees drove to work via single occupancy vehicle while only 17 percent of the campus population utilized mass transit, walk, bike, carpool, or van pool. Table 3.4-9 below identifies the percent of total trips by mode to the Roybal Campus during the day of the survey.

Table 3.4-9: Roybal Campus Travel Mode Split (FY 2012 Survey)

Mode	Percent of Total Trips
Single Occupancy Vehicle	83%
Walk	1%
Bike	1%
Mass Transit	2%
Car Pool	9%
Van Pool	4%

Vehicle Trip Generation

The Preferred Alternative involves the construction of a new laboratory, building renovation as well as the expansion of on-campus parking through the addition of a new approximately 1,600 space parking deck to be located in the southeast corner of the Roybal Campus, as well as infrastructure improvements. The Preferred Alternative would result in a net increase of approximately 1,200 new parking spaces, due to the loss of existing parking spaces, for a campus parking cap of approximately 4,500 spaces. Since on-campus parking is expected to continue to remain at capacity after the new deck

is constructed (including curbside overflow parking), (refer to Table 3.4-2), the number of new peak hour vehicle trips was constrained based on the number of new parking spaces. In order to estimate the future vehicle trips associated with the increase of new spaces, peak hour vehicle trip ratios were calculated as a function of vehicle counts taken at each HHS/CDC gate in 2012. For analysis purposes, a conservative net total of 1,260 new parking spaces was used to calculate peak hour vehicle trip ratios, to account for any potential modification in final parking design. The ratio of parking spaces to peak hour vehicle trips was applied to the number of new parking spaces in order to estimate the number of new vehicle trips generated under the Preferred Alternative. Table 3.4-10 identifies the number of existing trips as well as the number of trips related to the increase in available parking with the Master Plan in place.

Table 3.4-10: Peak Hour Vehicle Trips (Existing and under the Preferred Alternative)

	Number of Parking Spaces	Direction	Clifton Road Gate Vehicle Trips		Houston Mill Road Gate Vehicle Trips		Total	
			AM	PM	AM	PM	AM	PM
Existing HHS/CDC Parking Supply	3300	in*	694	128	333	7	1027	135
		out*	93	629	16	386	109	1015
Net New Parking Spaces	1260**	In	265	49	127	3	392	52
		Out	36	240	6	147	42	388

*Source: Traffic counts collected at HHS/CDC gates in 2012.

**For analysis purposes, a conservative net total of 1,260 new parking spaces was used to calculate peak hour vehicle trip ratios.

Based on the trip generation assessment, the Preferred Alternative would generate a total of 444 new vehicles trips in and 430 vehicle trips out of the Roybal Campus during the AM and PM peak hours. The HHS/CDC main gate accounts for over twice the amount of trips entering and leaving the campus when compared with the Houston Mill Road gate. The main gate provides easier access to Briarcliff Road and other roadways off of Clifton Road. In addition, the main gate handles access for all Roybal campus employees and visitors.

Trip Distribution

Zip codes of home addresses for existing HHS/CDC employees were reviewed in order to assist in determining frequently traveled routes to and from the Roybal Campus. In addition, an *Employee Travel Habit Survey* was conducted in March 2013 in order to assist in identifying Roybal Campus employee preferred travel routes to and from campus and to validate the trip distribution findings.¹⁰³ Table 3.4-11 below identifies the percentage of employees residing from areas around the Roybal Campus and corresponding routes that are typically used to commute to work.

Applying projected trip generation and trip distribution information discussed above, Preferred Alternative generated vehicle trips were estimated on Study Area streets and intersections. Figure 3.4-7: Project Vehicle Trip Generation AM and Figure 3.4-8: Project Vehicle Trip Generation PM show new vehicle trips generated as a result of the Preferred Alternative during the AM and PM peak hours.

Table 3.4-11: HHS/CDC Journey to Work

Route to Campus	Region Location (relative to Study Area)	Sample Town Locations	Percent of HHS/CDC Employees
N Decatur Rd to Haygood Dr.	East, Southeast	Conyers, Snellville	28%
Clifton Rd	South	McDonough, Stockbridge	8%
Briarcliff Rd northbound	South, Southwest, Southeast	Downtown Atlanta, Douglasville	17%
N Druid Hills Rd to Briarcliff Rd	North, Northwest	Lawrenceville, Brookhaven	14%
LaVista Rd to Houston Mill Rd	West, East	Midtown Atlanta	9%
LaVista Rd to Briarcliff Rd	North, Northwest	Alpharetta, Roswell	10%
Other			14%

Figure 3.4-7: Project Vehicle Trip Generation AM

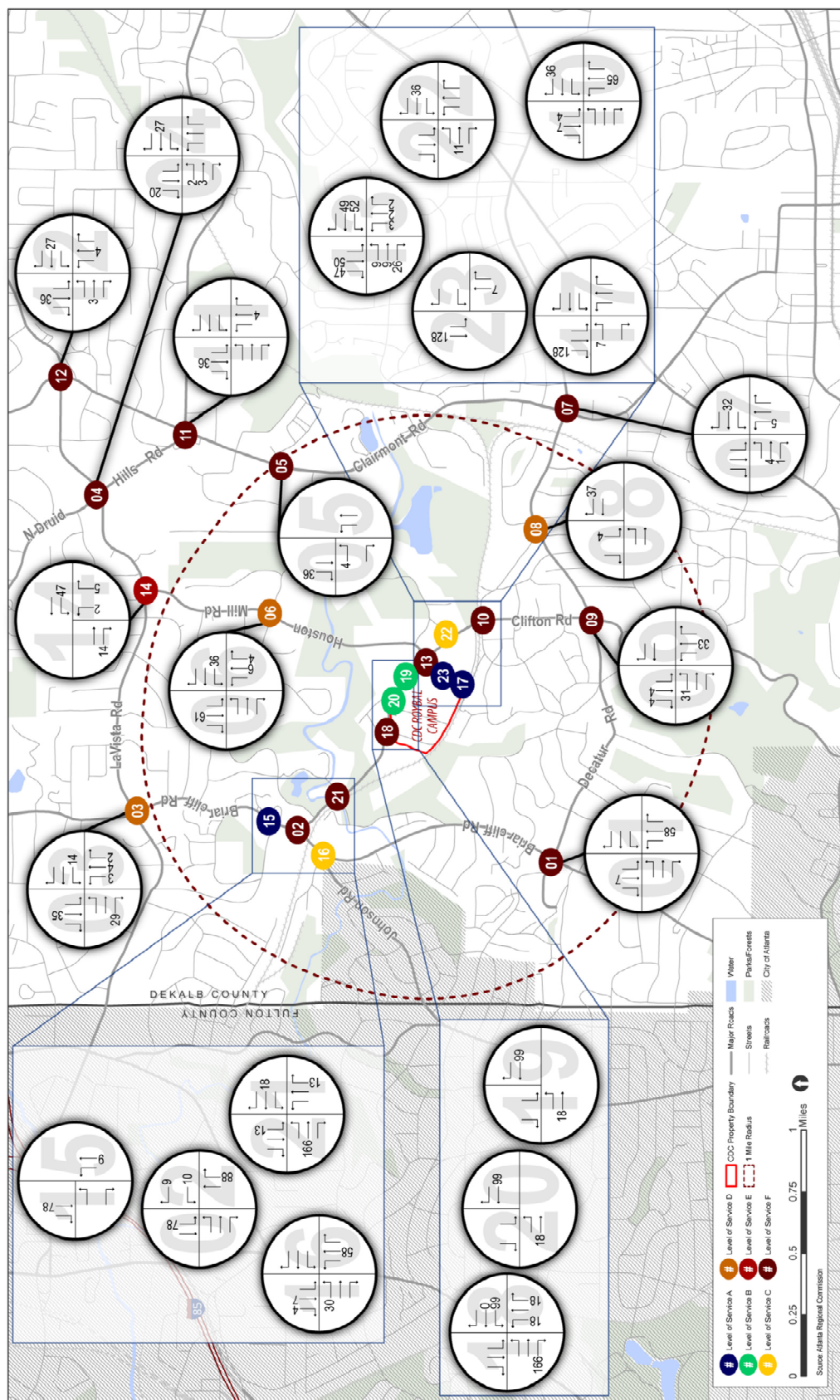
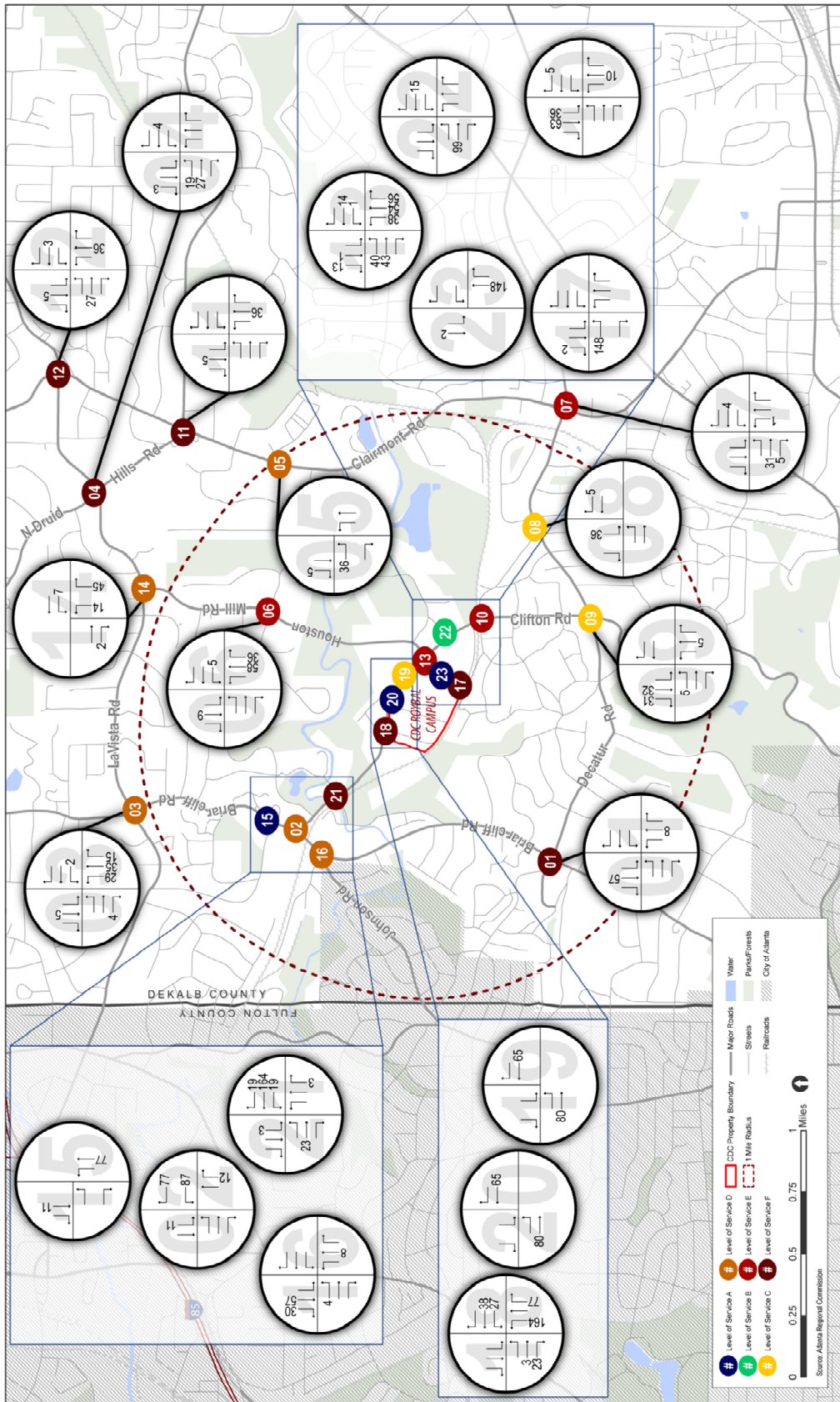


Figure 3.4-8: Project Vehicle Trip Generation PM



Significant Impact Criteria

The identification of potential significant traffic impacts was based on a comparison of traffic condition between the future No Action Alternative and the Preferred Alternative conditions. Since congested traffic conditions throughout the Clifton Corridor have been the norm, the driver population has adapted to these inefficiencies. In consideration of this, only traffic operations functioning at LOS E or F were considered unacceptable. If traffic conditions deteriorated to LOS E or F from No Action to Preferred Alternative traffic conditions, potential traffic mitigation was explored in an attempt to improve operations.

Traffic Conditions

Based on the background growth previously discussed in the No Action Alternative section, there would be a moderate increase in traffic volumes expected along the streets in the Study Area related to the Preferred Alternative (Refer to Figure 3.9: Traffic Volumes Preferred Alternative AM and 3.10: Traffic Volumes Preferred Alternative PM). Due to the pre-existing congested traffic conditions in the Study Area, and limited planned transportation infrastructure improvements, traffic operations at the majority of Study Area roadways would continue to deteriorate, functioning with long delays and unacceptable LOS. (Refer to Table 3.4-12). The following is a discussion of intersection locations that are projected to deteriorate to an unacceptable LOS under the Preferred Alternative conditions:

Clifton Road/Old Briarcliff Road would continue to operate at an unacceptable LOS F during the AM peak hour. During the PM peak hour, LOS operations deteriorate from LOS E in the No Action Alternative to LOS F in the Preferred Alternative. Westbound Clifton Road and northbound Old Briarcliff Road would operate with significant delays.

Clifton Road/HHS/CDC Entrance would deteriorate to an overall intersection LOS F in the AM and PM peak hours. The increased utilization of the main entrance as a result of the Preferred Alternative as well as heavy traffic volumes along Clifton Road contribute to high delays and congestion at this location.

Clifton Road/Houston Mill Road would continue to operate at an overall intersection LOS F during the AM, and would worsen to LOS E in the PM peak hour. During the PM peak hour, the northbound Houston Mill Road movement is projected to be at or over capacity, experiencing long vehicle delays.

Clifton Road/Haygood Road would deteriorate to an overall intersection LOS E under the Preferred Alternative condition from LOS D in the No Action Alternative during the PM peak hour. The southbound left turn movement is projected to be over capacity, experiencing long delays. The intersection would continue to operate at LOS F during the AM peak hour.

LaVista Road/Houston Mill Road would deteriorate to an overall intersection LOS E under the Preferred Alternative condition from LOS C in the No Action Alternative during the AM peak hour. The addition of Preferred Alternative-generated eastbound and westbound traffic on LaVista Road would contribute directly to increased traffic delays.

The unsignalized intersection of Houston Mill Road and the eastern HHS/CDC gate would experience increased delay during the PM peak hour. The additional traffic resulting from the Master Plan

contributes to higher delays, particularly eastbound left-turns from campus onto Houston Mill Road. This intersection may benefit from a new signal in the future.

Parking

The Preferred Alternative involves the construction of a new laboratory, a parking deck with space for approximately 1,600 vehicles, and the reorganization of the campus' transshipping facility to more efficiently accommodate the new parking deck. In order to provide the required space for construction, two surface lots would be eliminated. The Preferred Alternative would result in a net increase of approximately 1,200 new parking spaces, due to the loss of existing parking spaces, for a campus parking cap of approximately 4,500 spaces. Based on the Master Plan's population growth projections, on-campus parking is projected to be at capacity by the Preferred Alternative build year.

Pedestrian and Bicycle Conditions

As indicated in Table 3.4-9, the majority of trips generated by the Preferred Alternative would be made by automobiles. The implementation of the Master Plan would not impede pedestrian or bicycle access to the Roybal Campus, the Clifton Corridor, or overall Study Area. It is anticipated that existing sidewalks along Clifton Road or the Study Area would not be impacted by the Preferred Alternative. Internal walkways within the Roybal Campus would continue to provide internal campus circulation. Campus crosswalks and pedestrian infrastructure would continue to allow for a safe pedestrian experience for staff and visitors to the Roybal Campus. Based on the limited amount of pedestrian activity expected from the Preferred Alternative, the proposed improvements to the Roybal Campus are unlikely to result in significant pedestrian or bicycle impacts.

Local Transit Facilities and Services

As indicated in Table 3.4-9, the majority of trips generated by the Preferred Alternative would be made by automobiles. The implementation of the Preferred Alternative would not result in major alterations to public transit services or the manner in which individuals access the Roybal Campus, the Clifton Corridor, or overall Study Area. Since transit access is expected to remain largely similar as in existing conditions, the Preferred Alternative would not result in a significant increase in transit ridership. While the potential exists for a larger carpool/vanpool share within the Study Area, as a conservative measure a larger share was not assumed. Based on the limited amount of transit activity expected from the Preferred Alternative, the proposed improvements to the Roybal Campus are unlikely to result in significant impacts to the Study Area's transit infrastructure.

Figure 3.4-9: Traffic Volumes Preferred Alternative AM

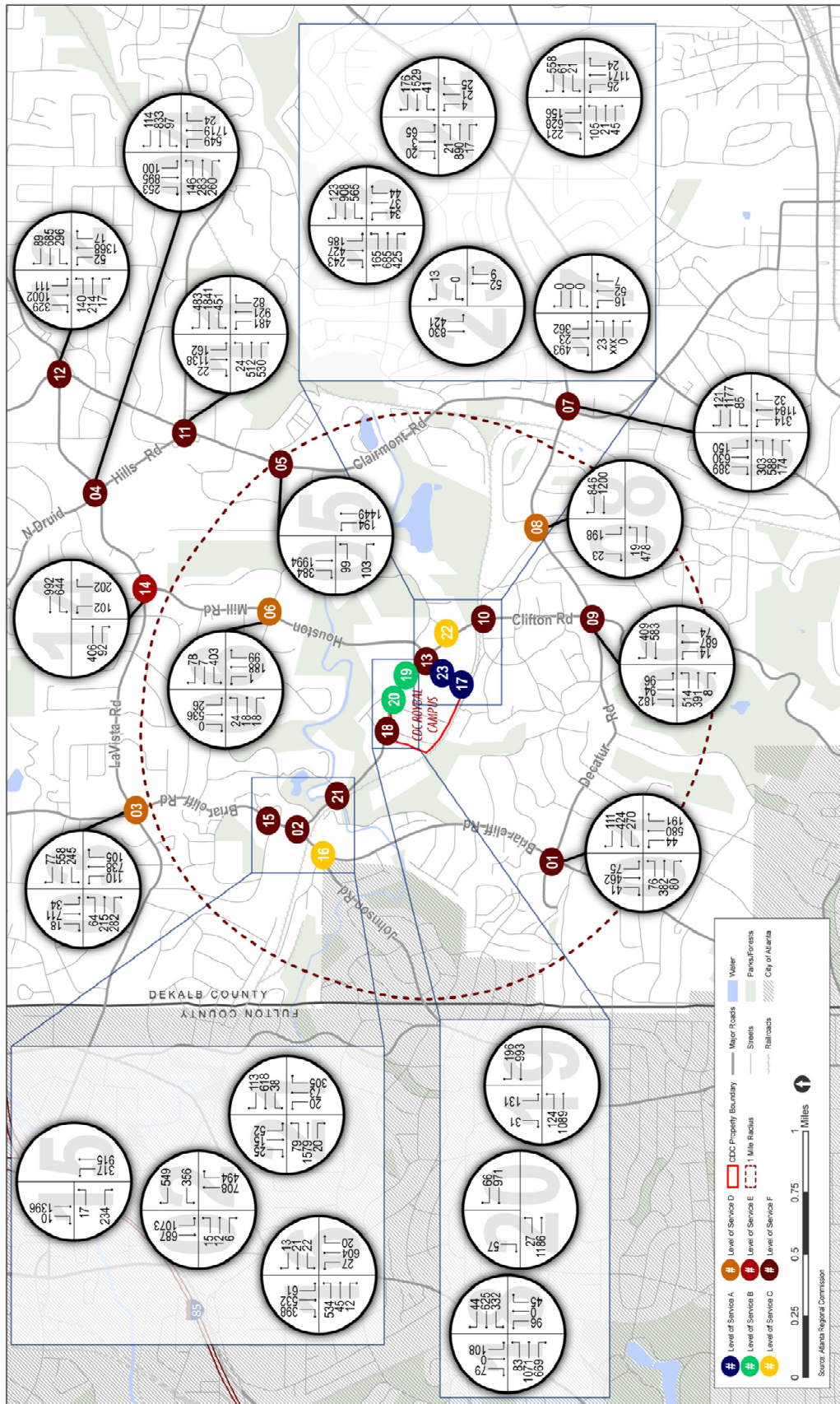


Figure 3.4-10: Traffic Volumes Preferred Alternative PM

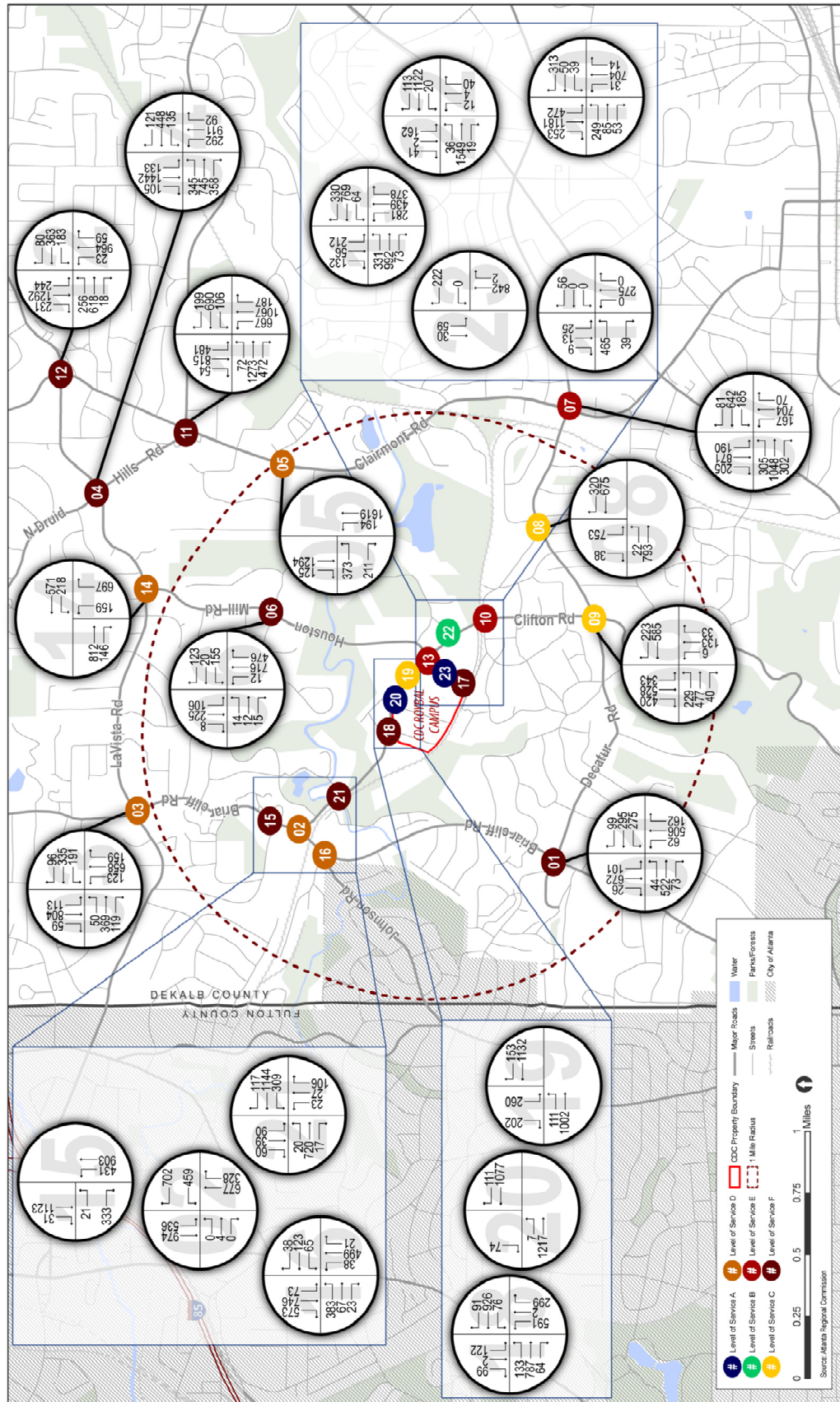


Table 3.4-12: Preferred Alternative LOS Operations

Preferred Alternative LOS Operations								
INTERSECTION & APPROACH	Mvt.	Weekday Peak Hour						
		AM			PM			
		V/C	Control Delay	LOS	V/C	Control Delay	LOS	
Signalized								
Clifton Road at Briarcliff Road								
Driveway	EB	LTR	0.25	47.2	D	0.01	34.5	C
Clifton Road	WB	LT	1.45	263.3	F	1.12	126.2	F
		R	0.85	22.7	C	0.96	41.8	D
Briarcliff Road	NB	LT	0.82	69.7	E	0.78	60.2	E
		R	0.78	37.1	D	0.57	16.2	B
	SB	L	1.35	192.4	F	1.05	84.8	F
		TR	0.31	6.3	A	0.50	19.6	B
Overall Intersection	-		1.45	99.6	F	1.12	53.9	D
Clifton Road at Old Briarcliff Road								
Clifton Road	EB	LTR	0.80	12.9	B	0.57	37.3	D
	WB	LTR	0.44	4.8	A	1.20	174.4	F
Old Briarcliff Road	NB	LTR	1.63	327.9	F	1.25	138.5	F
Towers Circle	SB	LTR	2.21	619.0	F	0.39	5.8	A
Overall Intersection	-		2.21	84.8	F	1.25	100.1	F
Clifton Road at HHS/CDC Entrance								
Clifton Road	EB	LTR	1.14	85.7	F	0.99	66.2	E
	WB	L	1.65	346.0	F	0.36	9.0	A
		TR	0.28	3.0	A	0.54	10.7	B
HHS/CDC Entrance	NB	L	0.34	53.9	D	1.25	174.4	F
		LTR	0.23	7.2	A	1.26	178.9	F
		R	0.14	3.7	A	0.56	21.2	C
Driveway	SB	LTR	1.21	158.6	F	1.54	300.3	F
Overall Intersection	-		1.65	99.3	F	1.54	84.2	F
Clifton Road at Emory Inn								
Clifton Road	EB	LT	0.68	14.3	B	0.53	9.8	A
	WB	TR	0.49	14.3	B	0.50	7.3	A
Emory Inn	SB	LR	0.15	0.6	A	0.22	2.3	A
Overall Intersection	-		0.68	14.1	B	0.53	9.0	A
Clifton Road at Emory Conference Center								
Clifton Road	EB	L	0.40	8.0	A	0.49	16.8	B
		T	0.49	7.1	A	0.49	13.1	B
	WB	T	0.51	13.8	B	0.70	25.6	C
		R	0.25	5.6	A	0.24	10.7	B
Emory Conference Center	SB	L	0.72	64.0	E	0.85	58.6	E
		R	0.16	13.2	B	0.55	16.6	B
Overall Intersection	-		0.72	13.5	B	0.85	24.0	C
Clifton Road at Houston Mill Road								
Clifton Road	EB	L	0.77	45.9	D	0.96	73.7	E
		TR	1.60	305.6	F	0.85	44.5	D
	WB	L	1.29	166.8	F	0.40	37.7	D
		T	0.74	24.4	C	0.90	78.4	E
		R	0.20	2.9	A	0.68	48.7	D
Houston Mill Road	NB	L	0.33	33.1	C	0.67	34.0	C
		T	0.14	42.5	D	1.04	98.1	F
		R	0.12	0.6	A	0.77	32.1	C
	SB	L	0.35	28.4	C	0.82	54.4	D
		TR	1.20	144.7	F	0.46	29.0	C
Overall Intersection	-		1.60	152.1	F	1.04	60.8	E
Clifton Road at Gatewood Road								

Preferred Alternative LOS Operations									
INTERSECTION & APPROACH		Mvt.	Weekday Peak Hour						
			AM			PM			
			V/C	Control Delay	LOS	V/C	Control Delay	LOS	
Clifton Road	EB	L	0.14	14.5	B	0.16	3.4	A	
		TR	0.42	32.1	C	0.72	16.7	B	
	WB	L	0.11	3.2	A	0.13	5.7	A	
		TR	0.74	9.3	A	0.61	9.1	A	
	Driveway	NB	LTR	0.32	31.3	C	0.21	18.6	B
			LTR	0.73	72.4	E	0.92	88.1	F
Gatewood Road	Overall Intersection	-	0.74	21.3	C	0.92	20.0	B	
Clifton Road at Haygood Road									
Clifton Road	SB	L	1.16	161.0	F	1.12	122.6	F	
		TR	0.74	24.0	C	1.00	49.5	D	
	NB	L	0.15	16.8	B	0.24	23.5	C	
		TR	1.45	234.8	F	0.89	53.1	D	
Asbury Circle	EB	L	0.90	83.0	F	0.94	73.9	E	
		TR	0.11	8.0	A	0.26	22.4	C	
Haygood Drive	WB	L	0.06	26.3	C	0.23	45.7	D	
		TR	1.07	84.8	F	0.91	47.2	D	
	Overall Intersection	-	1.45	134.2	F	1.12	60.3	E	
Houston Mill Road at Mason Mill Road									
Houston Mill Road	NB	LTR	0.40	17.3	B	1.34	182.0	F	
	SB	LTR	0.74	28.4	C	0.84	34.7	C	
Mason Mill Road	EB	LTR	0.11	15.4	B	0.11	18.6	B	
	WB	LTR	0.99	70.8	E	0.82	46.3	D	
Overall Intersection	-	0.99	39.4	D	1.34	132.7	F		
Briarcliff Road at LaVista Road									
Briarcliff Road	NB	L	0.19	16.7	B	0.23	16.4	B	
		T	0.49	29.9	C	0.45	30.3	C	
		R	0.13	6.6	A	0.23	13.4	B	
	SB	L	0.07	18.2	B	0.19	13.7	B	
		T	0.47	30.0	C	0.48	25.6	C	
		R	0.03	0.1	A	0.08	0.7	A	
LaVista Road	EB	L	0.40	38.2	D	0.26	38.8	D	
		TR	0.90	61.2	E	0.89	76.3	E	
	WB	L	0.82	43.3	D	0.89	83.4	F	
		TR	0.77	45.8	D	0.63	60.0	E	
Overall Intersection	-	0.90	37.7	D	0.89	40.7	D		
LaVista Road at Houston Mill Road									
LaVista Road	EB	TR	1.24	161.0	F	1.06	86.8	F	
	WB	L	0.90	39.0	D	0.62	46.1	D	
		TR	0.67	16.6	B	0.45	7.9	A	
Houston Mill Road	NB	L	0.66	81.3	F	0.74	79.5	E	
		R	0.17	0.3	A	0.57	1.7	A	
	Overall Intersection	-	1.24	65.7	E	1.06	42.5	D	
LaVista Road at N Druid Hills Road									
LaVista Road	EB	L	0.50	14.8	B	0.78	47.0	D	
		T	0.17	16.2	B	0.49	43.1	D	
		R	0.30	4.8	A	0.46	27.0	C	
	WB	L	0.16	19.3	B	0.42	22.1	C	
		T	0.49	36.3	D	0.30	30.6	C	
		R	0.14	12.0	B	0.16	11.3	B	
N Druid Hills Road	NB	L	4.35	Error	F	1.49	257.7	F	
		TR	2.34	628.9	F	1.23	160.4	F	
	SB	L	0.83	84.0	F	0.94	100.8	F	
		TR	1.75	377.0	F	2.10	529.6	F	
Overall Intersection	-	4.35	451.2	F	2.10	218.9	F		
LaVista Road at Clairmont Road									

Preferred Alternative LOS Operations								
INTERSECTION & APPROACH		Mvt.	Weekday Peak Hour					
			AM			PM		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
LaVista Road	EB	L	0.68	68.3	E	0.91	83.1	F
		TR	0.33	15.8	B	0.99	71.2	E
	WB	L	0.67	36.8	D	0.94	87.0	F
		TR	1.25	163.7	F	0.76	50.8	D
Clairmont Road	NB	L	0.40	36.1	D	0.11	44.0	D
		TR	1.36	191.4	F	0.87	81.0	F
	SB	L	0.77	62.2	E	1.23	172.5	F
		TR	1.22	148.6	F	1.33	193.0	F
Overall Intersection		-	1.36	143.9	F	1.33	121.7	F
Clairmont Road at N Druid Hills Road Clairmont Road	SB	L	0.24	29.4	C	2.49	693.6	F
		TR	0.87	36.1	D	1.07	112.1	F
	NB	L	1.76	392.7	F	1.99	476.9	F
		TR	1.14	108.0	F	1.33	195.9	F
N Druid Hills Road	EB	L	0.11	27.9	C	0.22	6.8	A
		T	0.52	32.5	C	0.87	37.3	D
	WB	R	0.93	32.8	C	0.57	20.8	C
		L	1.63	326.9	F	0.58	37.2	D
		T	2.12	534.4	F	0.47	30.8	C
		R	0.82	35.9	D	0.26	3.9	A
Overall Intersection		-	2.12	228.4	F	2.49	180.3	F
Clairmont Road at Mason Mill Road Clairmont Road	SB	TR	1.38	208.4	F	0.99	46.8	D
		L	0.76	74.6	E	0.82	65.9	E
	NB	T	0.66	9.0	A	0.82	22.4	C
		LR	0.60	50.8	D	1.08	104.6	F
Overall Intersection		-	1.38	123.7	F	1.08	50.7	D
Clairmont Road at N Decatur Road Clairmont Road	SB	L	0.95	113.7	F	0.72	57.7	E
		TR	1.22	133.7	F	1.08	108.4	F
	NB	L	1.23	169.1	F	1.23	184.4	F
		T	1.28	174.5	F	0.91	73.0	E
		R	0.06	0.2	A	0.14	0.6	A
		L	1.35	215.1	F	0.79	47.6	D
N Decatur Road	EB	TR	0.59	30.0	C	0.91	52.9	D
		L	0.36	24.4	C	1.20	167.9	F
	WB	TR	1.18	132.4	F	0.60	41.5	D
		-	1.35	132.2	F	1.23	75.0	E
Overall Intersection		-	1.35	132.2	F	1.23	75.0	E
N Decatur Road at Haygood Road N Decatur Road	WB	TR	1.03	51.5	D	0.52	10.4	B
		LT	0.34	11.2	B	0.49	17.0	B
Haygood Road	SB	LR	0.30	45.7	D	0.85	57.2	E
		-	1.03	44.0	D	0.85	26.6	C
Overall Intersection		-	1.03	44.0	D	0.85	26.6	C
N Decatur Road at Clifton Road N Decatur Road	WB	LT	1.05	90.7	F	0.85	46.5	D
		R	0.75	35.7	D	0.32	7.2	A
	EB	L	1.31	188.1	F	0.90	55.8	E
		TR	0.21	11.5	B	0.29	14.8	B
Clifton Road	SB	L	1.45	297.5	F	0.77	39.0	D
		T	0.22	7.6	A	0.97	43.3	D
		R	0.37	1.9	A	0.69	13.2	B
		LTR	1.21	148.5	F	0.47	51.7	D
Overall Intersection		-	1.45	102.1	F	0.97	33.3	C
N Decatur Road at Briarcliff Road								

Preferred Alternative LOS Operations										
INTERSECTION & APPROACH			Mvt.	Weekday Peak Hour						
				AM			PM			
				V/C	Control Delay	LOS	V/C	Control Delay	LOS	
N Decatur Road	WB	L	1.38	228.6	F	1.40	237.8	F		
		TR	0.95	72.8	E	0.70	48.5	D		
	TR	1.04	98.5	F	1.11	119.3	F			
	TR	1.21	144.5	F	1.03	86.9	F			
	TR	0.74	26.8	C	1.05	92.8	F			
	N Decatur Road at Johnson Road									
	N Decatur Road	NB	L	0.07	14.9	B	0.27	30.5	C	
			TR	0.33	14.6	B	0.48	28.3	C	
	T	0.29	13.5	B	0.53	43.8	D			
L	0.88	83.9	F	0.56	50.4	D				
Driveway	WB	TR	0.89	83.8	F	0.55	49.2	D		
		LTR	0.53	72.2	E	1.02	114.7	F		
Unsignalized										
Briarcliff Road at Shepards Lane										
Briarcliff Road	NB	L	2.65	822.8	F	1.09	96.5	F		
		T	0.55	0.0	A	0.67	0.0	A		
SB	TR	0.84	0.0	A	0.70	0.0	A			
	EB	LR	-	-	F	-	-	F		
Houston Mill Road at Rollins Way										
Houston Mill Road	SB	LT	0.35	3.2	A	0.12	3.2	A		
		NB	TR	0.04	0.0	A	0.38	0.0	A	
Rollins Way	WB	LR	0.02	8.6	A	0.53	19.3	C		
		Overall Intersection	-	0.35	3.4	A	0.53	4.6	A	
Houston Mill Road at HHS/CDC Driveway										
Houston Mill Road	SB	LT	0.26	7.8	A	0.02	5.3	A		
		R	0.31	0.0	A	0.01	0.0	A		
NB	TR	0.02	2.1	A	0.00	0.0	A			
	EB	L	0.20	27.8	D	1.34	196.7	F		
HHS/CDC Driveway	WB	R	0.00	0.0	A	0.04	8.5	A		
		LTR	0.00	0.0	A	0.13	10.8	B		
Garage	Overall Intersection	-	0.31	4.2	A	1.34	103.3	F		

Traffic Mitigation

Traffic Mitigation

The Preferred Alternative is anticipated to generate traffic that would result in significant impacts to intersections in the Study Area. When considering the projected background growth by the year 2025, and lack of transportation improvements planned for the area, the majority of Study Area intersection locations are expected to function at unacceptable levels of service with long vehicle delays and congestion.

New vehicle trips generated as a result of the Preferred Alternative would further aggravate traffic conditions. Traffic mitigation proposed as part of this assessment is limited to cost-effective, readily implementable improvements. The traffic mitigation measures identified include both those that can be implemented by the HHS/CDC as well as suggested measures that are beyond the jurisdiction of the HHS/CDC and would have to be carried out by other public agencies. The HHS/CDC does not have authority to spend appropriated money on non-Federal property without specific legislation; the HHS/CDC would work with federal, state and local government to determine the feasibility and funding for these mitigation measures. Proposed mitigation measures include:

- Signalization
- Signal Optimization/Retiming
- Lane Restriping
- Widening (only approaches that may have sufficient right-of-way)

All Study Area intersections would require signal optimization. New traffic signals are recommended for the intersections of Briarcliff Road and Shepards Lane and at the Houston Mill Road HHS/CDC entrance. Full signal warrant studies should be conducted to verify the feasibility of this recommendation. In addition, it is recommended that intersection improvements are made at the following locations:

Clifton Road/Briarcliff Road – An additional left turn lane on the southbound Briarcliff Road approach is recommended. The additional lane would require roadway widening.

Clifton Road/Old Briarcliff Road – A left turn lane on the westbound approach of Clifton Road is recommended. The additional lane would require roadway widening.

Clifton Road/HHS/CDC Main Entrance – A 2nd left turn is recommended on the Clifton Road eastbound approach. The northbound approach at the HHS/CDC main entrance should be restriped to allow for two left turn lanes and one shared thru-right lane. Both recommendations would be limited to restriping and would not require roadway widening. In addition, the signal phasing should be modified to a northbound/southbound split-phase configuration.

North Decatur Road/Clifton Road – A short right turn lane on the northbound approach of Clifton Road is recommended. Two new receiving lanes are recommended on Southbound Clifton Road. While these improvements would require roadway widening, there appears to be sufficient right-of-way (ROW) available. In addition, the Clifton Road southbound right-turn lane should be restriped to a shared thru-right lane.

While these improvements would not eliminate the Study Area's traffic congestion issues, they could contribute to improving traffic efficiency and would bring conditions similar to operations previously discussed under the No Action Alternative. The proposed mitigation measures require further detailed analysis in order to assess the feasibility and/or viability of these improvements and would require coordination with various local agencies including GDOT and DeKalb County. Table 3.4-13 identifies the Preferred Alternative conditions with proposed traffic mitigation in place.

Table 3.4-13: Preferred Alternative with Mitigated Traffic Conditions

Preferred Alternative with Mitigated Traffic Condition								
INTERSECTION & APPROACH	Mvt.	Weekday Peak Hour						
		AM			PM			
		V/C	Control Delay	LOS	V/C	Control Delay	LOS	
Signalized								
Clifton Road at Briarcliff Road								
Driveway	EB	LTR	0.09	32.3	C	0.01	25.0	C
Clifton Road	WB	LT	0.97	89.5	F	0.91	63.1	E
		R	0.71	9.7	A	0.76	10.1	B
Briarcliff Road	NB	LT	0.76	57.1	E	0.88	50.3	D
		R	0.65	13.0	B	0.64	13.0	B
	SB	L	1.09	95.3	F	0.81	57.9	E
		TR	0.36	5.7	A	0.58	13.1	B
Overall Intersection	-		1.09	51.5	D	0.91	40.3	D
Clifton Road at Old Briarcliff Road								
Clifton Road	EB	LTR	1.01	49.1	D	0.52	22.5	C
	WB	L	0.38	27.5	C	0.77	19.6	B
		TR	0.35	3.1	A	0.65	8.8	A
Old Briarcliff Road	NB	LTR	1.04	92.4	F	0.46	26.4	C
Towers Circle	SB	LTR	1.02	125.4	F	0.90	81.5	F
Overall Intersection	-		1.04	47.5	D	0.90	19.5	B
Clifton Road at HHS/CDC Entrance								
Clifton Road	EB	L	0.21	5.7	A	0.82	83.4	F
		TR	1.07	54.2	D	0.67	24.7	C
	WB	L	1.06	90.7	F	0.43	16.6	B
		TR	0.32	17.0	B	0.86	27.6	C
HHS/CDC Entrance	NB	L	0.82	104.0	F	0.93	68.8	E
		TR	0.17	1.3	A	0.71	29.8	C
Driveway	SB	LTR	1.12	116.1	F	0.99	99.9	F
Overall Intersection	-		1.12	55.7	E	0.99	42.6	D
Clifton Road at Emory Inn								
Clifton Road	EB	LT	0.68	8.2	A	0.53	7.9	A
	WB	TR	0.49	6.3	A	0.50	6.0	A
Emory Inn	SB	LR	0.15	0.6	A	0.22	2.3	A
Overall Intersection	-		0.68	7.3	A	0.53	7.0	A
Clifton Road at Emory Conference Center								
Clifton Road	EB	L	0.40	4.1	A	0.48	15.9	B
		T	0.48	1.9	A	0.48	5.6	A
	WB	T	0.49	7.0	A	0.67	13.9	B
		R	0.25	2.1	A	0.23	3.3	A
Emory Conference Center	SB	L	0.74	70.1	E	0.86	64.1	E
		R	0.17	14.1	B	0.55	17.8	B
Overall Intersection	-		0.74	8.4	A	0.86	17.4	B
Clifton Road at Houston Mill Road								
Clifton Road	EB	L	0.67	38.5	D	0.92	64.3	E
		TR	1.25	143.6	F	0.75	26.1	C
	WB	L	1.41	222.7	F	0.49	31.6	C
		T	0.67	22.1	C	0.84	48.2	D
		R	0.18	3.2	A	0.62	20.4	C
Houston Mill Road	NB	L	0.54	60.3	E	0.72	38.3	D
		T	0.14	41.0	D	0.97	81.3	F
		R	0.11	0.5	A	0.78	36.4	D
	SB	L	0.41	33.9	C	1.08	115.7	F
		TR	1.29	179.3	F	0.50	32.1	C
Overall Intersection	-		1.41	115.4	F	1.08	46.3	D
Clifton Road at Gatewood Road								

Preferred Alternative with Mitigated Traffic Condition									
INTERSECTION & APPROACH		Mvt.	Weekday Peak Hour						
			AM			PM			
			V/C	Control Delay	LOS	V/C	Control Delay	LOS	
Clifton Road	EB	L	0.14	10.5	B	0.16	4.0	A	
		TR	0.41	23.0	C	0.70	7.8	A	
	TR	0.73	8.8	A	0.60	16.1	B		
	Driveway	NB	LTR	0.33	33.2	C	0.22	19.4	B
			LTR	0.75	76.0	E	0.96	98.3	F
	Gatewood Road	SB	LTR	0.75	76.0	E	0.96	98.3	F
	Overall Intersection	-	0.75	18.4	B	0.96	18.0	B	
Clifton Road at Haygood Road									
Clifton Road	SB	L	1.24	184.2	F	1.05	83.5	F	
		TR	0.61	12.6	B	0.90	25.6	C	
	NB	L	0.13	13.5	B	0.29	24.1	C	
		TR	1.16	104.1	F	0.80	42.0	D	
Asbury Circle	EB	L	1.09	143.2	F	1.13	129.0	F	
		TR	0.13	10.3	B	0.28	26.8	C	
Haygood Drive	WB	L	0.07	31.1	C	0.24	48.5	D	
		TR	1.28	170.3	F	0.94	54.9	D	
	Overall Intersection	-	1.28	99.7	F	1.13	48.1	D	
Houston Mill Road at Mason Mill Road									
Houston Mill Road	NB	LTR	0.45	18.3	B	1.11	80.2	F	
		LTR	0.83	33.9	C	0.66	14.7	B	
Mason Mill Road	EB	LTR	0.11	10.8	B	0.18	37.8	D	
		LTR	0.93	47.4	D	1.27	190.1	F	
	Overall Intersection	-	0.93	33.9	C	1.27	83.6	F	
Briarcliff Road at LaVista Road									
Briarcliff Road	NB	L	0.19	15.8	B	0.26	20.7	C	
		T	0.49	30.7	C	0.50	31.4	C	
		R	0.13	4.5	A	0.24	11.2	B	
	SB	L	0.07	18.6	B	0.22	18.1	B	
		T	0.47	30.3	C	0.54	31.9	C	
		R	0.03	0.1	A	0.08	0.2	A	
LaVista Road	EB	L	0.42	39.2	D	0.27	36.2	D	
		TR	0.91	62.0	E	0.90	77.4	E	
		L	0.81	46.9	D	0.65	36.8	D	
	WB	L	0.74	41.4	D	0.49	36.1	D	
		TR	0.91	37.5	D	0.90	36.6	D	
	Overall Intersection	-	0.91	37.5	D	0.90	36.6	D	
LaVista Road at Houston Mill Road									
LaVista Road	EB	T	0.41	32.8	C	0.74	34.9	C	
		R	0.47	15.7	B	0.14	9.0	A	
		L	0.76	11.9	B	0.67	35.8	D	
	WB	TR	0.66	4.2	A	0.44	4.9	A	
		L	0.68	84.2	F	0.79	86.5	F	
		R	0.17	0.3	A	0.57	1.7	A	
Houston Mill Road	NB	R	0.17	0.3	A	0.57	1.7	A	
	Overall Intersection	-	0.76	14.6	B	0.79	21.3	C	
LaVista Road at N Druid Hills Road									
LaVista Road	EB	L	1.32	221.9	F	1.13	119.1	F	
		T	0.34	34.7	C	0.92	64.5	E	
		R	0.46	5.8	A	0.77	36.1	D	
	WB	L	0.35	44.7	D	0.97	87.0	F	
		T	1.01	74.9	E	0.97	84.2	F	
		R	0.24	12.5	B	0.38	15.0	B	
N Druid Hills Road	NB	L	1.27	161.4	F	1.22	170.5	F	
		TR	1.02	74.4	E	0.66	35.3	D	
		L	0.91	94.6	F	0.55	24.1	C	
	SB	L	1.21	146.8	F	1.07	86.3	F	
		TR	1.32	97.3	F	1.22	73.0	E	
	Overall Intersection	-	1.32	97.3	F	1.22	73.0	E	

Preferred Alternative with Mitigated Traffic Condition								
INTERSECTION & APPROACH		Mvt.	Weekday Peak Hour					
			AM			PM		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
LaVista Road at Clairmont Road								
LaVista Road	EB	L	1.27	216.5	F	1.00	113.6	F
		TR	0.49	90.3	F	1.09	105.4	F
	WB	L	0.69	34.4	C	1.05	117.6	F
		TR	1.19	140.0	F	0.95	81.2	F
Clairmont Road	NB	L	0.59	40.9	D	0.20	36.6	D
		TR	1.10	78.1	E	0.88	81.6	F
	SB	L	1.22	190.1	F	0.85	65.6	E
		TR	1.03	74.8	E	1.04	73.0	E
	Overall Intersection	-	1.27	92.6	F	1.09	84.1	F
Clairmont Road at N Druid Hills Road								
Clairmont Road	SB	L	0.92	91.4	F	1.07	88.7	F
		TR	1.22	140.1	F	0.99	81.9	F
	NB	L	1.34	217.1	F	0.99	71.9	E
		TR	0.91	47.0	D	1.15	118.1	F
N Druid Hills Road	EB	L	0.26	35.8	D	0.35	22.5	C
		T	0.58	60.8	E	1.09	86.2	F
		R	0.99	55.7	E	0.64	22.5	C
	WB	L	1.01	73.5	E	0.93	98.3	F
		T	1.28	167.0	F	0.63	45.1	D
		R	0.63	22.9	C	0.32	5.5	A
	Overall Intersection	-	1.34	111.4	F	1.15	78.3	E
Clairmont Road at Mason Mill Road								
Clairmont Road	SB	TR	1.07	75.0	E	0.91	24.0	C
	NB	L	1.02	124.9	F	1.00	104.6	F
		T	0.57	3.5	A	0.80	17.1	B
Mason Mill Road	EB	LR	1.09	136.6	F	1.12	119.8	F
	Overall Intersection	-	1.09	55.9	E	1.12	40.8	D
Clairmont Road at N Decatur Road								
Clairmont Road	SB	L	1.11	155.7	F	0.72	39.7	D
		TR	1.13	96.6	F	1.02	77.1	E
	NB	L	1.23	169.4	F	0.98	101.7	F
		T	1.16	125.0	F	0.70	51.8	D
		R	0.06	0.2	A	0.13	0.5	A
N Decatur Road	EB	L	1.29	198.0	F	0.80	46.2	D
		TR	0.62	31.2	C	1.06	95.2	F
	WB	L	0.39	26.8	C	0.98	100.1	F
		TR	1.28	171.7	F	0.76	54.3	D
	Overall Intersection	-	1.29	123.7	F	1.06	72.2	E
N Decatur Road at Haygood Road								
N Decatur Road	WB	TR	0.84	20.3	C	0.51	6.4	A
	EB	LT	0.25	3.1	A	0.48	15.9	B
Haygood Road	SB	LR	0.79	83.7	F	0.88	61.4	E
	Overall Intersection	-	0.84	22.4	C	0.88	26.0	C
N Decatur Road at Clifton Road								
N Decatur Road	WB	LT	1.15	127.2	F	0.75	35.3	D
		R	0.81	41.6	D	0.21	4.8	A
	EB	L	1.23	157.2	F	0.87	43.4	D
		TR	0.22	12.4	B	0.28	13.5	B
Clifton Road	SB	L	1.13	178.4	F	0.75	54.0	D
		TR	0.33	3.8	A	0.94	29.4	C
	NB	LT	1.06	97.2	F	0.51	60.6	E
		TR	0.19	3.4	A	0.15	1.1	A
	Overall Intersection	-	1.23	86.1	F	0.94	31.1	C

Preferred Alternative with Mitigated Traffic Condition										
INTERSECTION & APPROACH		Mvt.	Weekday Peak Hour							
			AM			PM				
			V/C	Control Delay	LOS	V/C	Control Delay	LOS		
N Decatur Road at Briarcliff Road	N Decatur Road	WB	L	1.13	133.8	F	1.09	123.2	F	
		TR	0.88	59.7	E	0.56	34.5	C		
	EB	L	0.73	65.6	E	0.15	22.6	C		
		TR	1.11	123.1	F	1.04	96.6	F		
	Briarcliff Road	NB	L	0.24	23.7	C	0.68	63.2	E	
		TR	1.17	128.4	F	1.11	113.0	F		
	SB	L	0.90	111.7	F	0.98	136.6	F		
		TR	0.72	29.1	C	1.10	107.8	F		
	Overall Intersection		-	1.17	92.3	F	1.11	96.5	F	
	N Decatur Road at Johnson Road	N Decatur Road	NB	L	0.07	21.7	C	0.30	40.2	D
			TR	0.33	20.6	C	0.50	38.4	D	
		SB	L	0.18	17.1	B	0.37	38.8	D	
			T	0.29	14.4	B	0.56	39.9	D	
Johnson Road		R	0.41	3.1	A	0.69	17.3	B		
		L	0.81	71.4	E	0.69	62.3	E		
EB		TR	0.81	71.2	E	0.67	60.8	E		
		LTR	0.53	73.3	E	0.72	61.2	E		
Driveway		WB	-	0.81	29.7	C	0.72	41.2	D	
Overall Intersection		-	0.81	29.7	C	0.72	41.2	D		
Unsignalized										
Briarcliff Road at Shepards Lane		Briarcliff Road	NB	L	0.73	30.3	D	0.85	33.1	C
			T	0.60	16.3	C	0.73	24.8	C	
	SB	TR	0.65	22.5	C	0.62	35.7	E		
		EB	LR	0.81	26.2	D	0.85	25.0	C	
	Overall Intersection		-	0.81	30.0	C	0.85	56.5	E	
Houston Mill Road at Rollins Way	Houston Mill Road	SB	LT	0.35	3.2	A	0.12	3.2	A	
		NB	TR	0.04	0.0	A	0.38	0.0	A	
	Rollins Way	WB	LR	0.02	8.6	A	0.53	19.3	C	
		Overall Intersection		-	0.35	3.4	A	0.53	4.6	A
Houston Mill Road at HHS/CDC Driveway	Houston Mill Road	SB	LT	0.38	4.3	A	0.18	24.4	C	
		R	0.37	1.2	A	0.02	0.1	A		
	HHS/CDC Driveway	NB	TR	0.07	2.5	A	0.68	32.3	C	
		EB	L	0.17	25.2	D	0.81	28.8	C	
	Garage	R	0.00	0.0	A	0.05	2.2	A		
		WB	LTR	0.00	0.0	A	0.33	5.8	A	
	Overall Intersection		-	0.38	3.4	A	0.81	26.2	D	

In addition to roadway specific mitigation measures, alternative mitigation strategies, such as Transportation Demand Management (TDM) and policy initiatives to reduce traffic congestion are discussed below. The discussion focuses on the applicability of alternative mitigation strategies at the Roybal Campus, however these measures could also be implemented by other institutions and employers within the Study Area in an effort to reduce traffic congestion.

Transportation Demand Management

Transportation Demand Management (TDM) is typically employed to increase overall transportation system efficiency by encouraging a shift from single-occupancy vehicle travel to non-single occupancy travel modes, or shifting automobile trips outside of peak commuting periods. TDM looks to decrease automobile trips and associated vehicle miles traveled (VMT) by providing incentives and programming to assist individuals to modify their travel behavior.¹⁰⁴ TDM strategies can be implemented via governmental agencies, employers or local partnerships. The HHS/CDC is currently engaged in or has previously attempted a variety of TDM strategies. The HHS/CDC continues to examine ways to enhance or improve upon existing TDM programs. Further integration and/or implementation of TDM strategies which could further contribute to the reduction of vehicle congestion and improvement of traffic conditions within the transportation Study Area include:

Employee-Based Transportation Programs. Employer-based TDM strategies can be effective since these programs can be specifically tailored to the both needs of the employee and the industry in which they are employed. As noted in Existing Conditions, the HHS/CDC has instituted a Transportation Choices program focused on increasing both the total number of clean commuters and the frequency of clean commuting to campus. This program in itself functions as a TDM program in that it is designed to reduce the use of single-occupancy motor vehicles for commuter travel.¹⁰⁵ At present, the HHS/CDC provides opportunities to escape a congested commute by providing the option for HHS/CDC personnel to telecommute. Participation in HHS/CDC's telework program has increased approximately 86 percent in the last three years (between FY 2009 and FY 2012). In addition, the use of internet portal, videoconferencing, and web-based meetings, has aided in a reduction of work-related travel. The continued implementation and strengthening of this program at the Roybal Campus would help to influence the commuting choices of the campus population. A flexible work schedule allowing employees to compress their work week into fewer days per week or allowing employees to stagger shifts and travel to the campus during off-peak commuting hours are TDM strategies that are commonly implemented. These strategies or similar variations are currently in use at the Roybal Campus. The continuation and fortification of these programs should be given additional consideration.

Carpooling/Vanpooling. Typically, carpooling and/or vanpooling is ideal for individuals who have limited access to mass transit and/or commute daily from long distances to places of employment or school. At the Roybal Campus, preferred carpool and vanpool parking is available for HHS/CDC employees. Commuter data and campus transportation statistics provided by the HHS/CDC for 2012, indicated that the provision of preferred carpool parking spaces increased the use of this mode of transportation among employees. The HHS/CDC also participates in rideshare matching for carpools and vanpools through ARC in the Atlanta region as well as other MPOs and municipalities across the nation. The provision of free vanpool or carpool vehicles would eliminate the need for employees to bring a private car to work. This would function as another means to potentially increase participation in the

¹⁰⁴ Seattle Urban Mobility Plan. *Best Practices Transportation Demand Management (TDM)*. January 2008. p. 7A-1.

¹⁰⁵ U.S. Centers for Disease Control and Prevention. *Transportation Statistics for Fiscal Year 2012*. February 12, 2013. p. 1.

carpool/vanpool program. Free taxi ride vouchers for late night trips or trips outside of normal mass transit hours might be another incentive for employees.

Bicycling and Pedestrian Activity. The HHS/CDC offers secure campus parking for bicycles. Pedestrian pathways are located throughout the campus. Shower and locker facilities are also available to staff who wish to walk or cycle to work. These existing facilities and future associated enhancements could make these non-automobile options more attractive.

Campus Amenities. The provision of a garden market, on-site day care facilities, fitness center and food services are amenities that mirror local commercial convenience uses found within the Clifton Corridor. The presence of these on-campus uses may help to reduce off-site trips into the community.

Institute Additional Clean Commute Days. HHS/CDC has conducted “Try-It-Days” over the last three years (FY 2010 - 2012) at each of their metro Atlanta facilities. In 2012, commuter counts conducted at the Roybal Campus indicated that approximately 585 personnel or approximately 12 percent of the campus population walked, biked, used transit or carpooled to work. This is an increase of over 3 percent from 2010 when 9 percent of the campus population or approximately 400 commuters used clean commuting modes. The implementation of several clean commute days throughout the calendar year would help to reinforce the sustainable culture of the HHS/CDC.

Policy

Policy initiatives that could help alleviate traffic conditions at the Roybal Campus and its surroundings, if implemented, include the following:

Parking Management/Charging for Campus Parking. On-site parking at the Roybal Campus is currently free. A free parking supply at a destination can be a crucial factor in deciding whether to drive a single-occupancy vehicle to work or take a different mode of transportation such as a bus, bicycle or vanpool. Free parking tends to lead to overuse as well as all-day parking. As previously mentioned in Existing Conditions, parking is currently at capacity at the Roybal Campus. Typically, parking demand that exceeds the available supply can lead to vehicles circling repeatedly around the campus in search of limited available parking spaces. This behavior can result in congestion and delay within the campus and on area roadways. The installation of electronic parking guidance system to direct motorists from campus entrances to available parking locations could help to reduce idling, associated fuel consumption, and generally make campus parking operations slightly more efficient. Shifting to a pay to park scenario, in combination with the sustainable transit initiatives currently implemented at the HHS/CDC, may help to reduce single occupancy vehicles traveling to the Roybal Campus.

Parking Cash-Out. This concept would coincide with a pay to park scenario on the HHS/CDC campus. The HHS/CDC would charge employees to park on campus while providing campus personnel with a monetary increase to offset the cost to park. The parking cash-out would enable employees to use these funds for on-site parking or if they decided to use an alternate mode of transportation they would be able to take home the monetary difference.

Marketing the Use of Park and Ride. As a result of the medical and research related concentrations situated within the Clifton Corridor, this area will always draw visitors from beyond the immediate Study Area. The use of park and ride lots would help to reduce parking demand in corridor as well as the automobiles traveling through area neighborhoods to corridor destinations. The concept of capturing

traffic at perimeter points in order to potentially limit the number of cars operating in the Clifton Corridor was examined in Clifton Corridor Transportation Study - Phase Two. Potential park and ride locations included Toco Hills Shopping Center, Sage Hill, the Briarcliff Campus, Cheshire Bridge and LaVista. The use of these facilities would work in concert with possible expansion of CCTMA/Cliff shuttle and as intermodal facilities for future rail transit.

Peak-Period Transit Priority Lanes. Generally, the ability to implement traditional Bus Rapid Transit (BRT) or High Occupancy Vehicle (HOV) lanes within the Study Area are constrained by the limited available roadway right-of-way and the densely-developed nature of the area. However, the potential for a “Transit-Only” lane exclusively during peak commuting should be explored. These lanes would revert back to standard traffic lanes for cars during non-peak commuting hours.

Transit Reimbursement/Commuter Rewards Program. Currently, the HHS/CDC participates in a public transportation subsidy program known as Fare Share. The reimbursement level for this program was reduced from \$230 per month in 2011 to \$125 in 2012. The campus population’s participation in the Fare Share program decreased from 2011 levels correlating to the reduction in the subsidy. An additional subsidy provided to HHS/CDC personnel (i.e., prize, monetary rewards, free or low-cost MARTA Breeze cards/transit passes) may incentivize additional employees to use clean commuter modes of transit (i.e., vanpool, carpool, mass transit, cycling, walking).

Connections to Existing Mass Transit. This concept would involve the utilization of a carpool/vanpool fleet to connect the Roybal Campus with existing MARTA bus service stops within the Study Area as well as MARTA rail station beyond the Study Area system.

Cliff Shuttle Service Funding. Cliff shuttle service to major corridor destinations is currently available to Emory University students, staff, and the general public. Emory University representatives have indicated that Cliff is approaching its ridership capacity. In the event that ridership increases in the future, Emory University may revise this policy relative to public access to the Cliff service. If the HHS/CDC were to provide additional funding to the Cliff, it would enable this crucial corridor transportation system to continue to provide services to HHS/CDC employees and the public.

HHS/CDC Mission. The mission of the HHS/CDC pertains to protecting the health of the nation and its communities through health promotion, prevention of disease, injury and disability, and preparedness for new health threats.¹⁰⁶ The HHS/CDC engages in the following functions in order to achieve its mission:

- Monitor health
- Detect and investigate health problems
- Conduct research to enhance prevention
- Develop and advocate sound public health policies
- Implement prevention strategies and promote healthy behavior
- Foster safe and healthful environments
- Provide leadership and training

Congestion and increases in traffic would occur in the future irrespective of the implementation of the Preferred Alternative due to the background growth contributed by many major employment centers

¹⁰⁶ CDC. *Vision, Mission, Core Values, and Pledge* <http://www.cdc.gov/about/organization/mission.htm> (May 24, 2013).

located within the Clifton Corridor. These destinations, as world-renown educational, medical and research institutions also function as destinations within the Clifton Corridor which attract travelers from beyond the Clifton Corridor.

The HHS/CDC's mandate relates solely to the protection of the nation's health and the institution of mitigation measures beyond its facilities and campuses is beyond the scope of their mission. However, as indicated above, the HHS/CDC employs a number of TDM measures on the Roybal Campus designed to provide transportation alternatives to the single-occupancy vehicle and incentivize employees. This programming helps to reduce car traffic to the campus and also promotes public health and exercise (bicycling, walking).

3.5 Air Quality

3.5.1 Affected Environment

Ambient air quality, or the quality of the surrounding air, may be affected by air pollutants produced by motor vehicles, referred to as “mobile sources;” or fixed facilities, usually referenced as “stationary sources”. Generally, mobile source analyses consider projects that add new vehicles to the road, alter traffic patterns due to diversions, or include parking lots or garages. Examples of stationary sources include exhaust from boiler stacks used for climate control systems in a building, process exhaust from an industrial factory, or stack emissions from a power generation plant.

The following section provides regulatory context for air quality and assesses and summarizes the potential air quality impacts associated with the Preferred Alternative. Air quality during construction activities associated with the Master Plan improvements is discussed in Section 13.3 Construction Impacts. The effects of the Preferred Alternative were analyzed pursuant to the Clean Air Act of 1970, and its amendments.

Regulatory Background

The regulation of air pollution was enabled by the Clean Air Act of 1970, a federal law further amended in 1977 and 1990 to improve its definition and scope of compliance. This law directs the U.S. Environmental Protection Agency (EPA) to protect public health and welfare by establishing National Ambient Air Quality Standards (NAAQS) for a critical set of hazardous air pollutants known as “criteria” pollutants. These standards accompany a mandate for each state to continually demonstrate attainment of, or progress toward attainment of the NAAQS.

Areas which do not meet the NAAQS for any number of critical air pollutants are designated by EPA as nonattainment areas. A state which contains nonattainment areas is required to develop a state implementation plan (SIP) detailing the means by which the state would attain the NAAQS for each violating pollutant. As nonattainment areas improve and qualify as in attainment of the NAAQS, a new maintenance SIP is developed to establish methods by which the state intends to maintain the standards. Upon EPA approval, these areas are newly classified as maintenance areas. Although these areas are in attainment of NAAQS, maintenance areas are subject to the same project-level analysis requirements as nonattainment areas. This ensures that projects taking place in maintenance areas would not cause new NAAQS violations. In addition to the criteria pollutants, the EPA regulates mobile source air toxics (MSAT) and greenhouse gases (GHG).

National Ambient Air Quality Standards (NAAQS)

The NAAQS regulates six criteria pollutants, namely carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), sulfur dioxide (SO₂), and particulate matter in two size varieties (PM_{2.5} and PM₁₀). Two sets of standards govern the emission of these criteria pollutants, with primary standards aimed at protecting the public health of sensitive populations such as asthmatics, children, and the elderly, while secondary standards protect such public welfare matters as visibility, damage to animals, crops,

vegetation, and buildings. To be in attainment of the NAAQS is to demonstrate criteria pollutant concentrations below the levels set by the current NAAQS as shown in Table 3.5-1.

Mobile Source Air Toxics

MSATs are compounds emitted from highway vehicles and non-road equipment (e.g., locomotives and construction vehicles) that have the potential to cause adverse health effects. In February 2007, EPA issued a rule to reduce MSATs through cleaner fuels and cleaner engines. The requirements for refineries to reduce the concentration of hazardous pollutants in gasoline began in 2011. Requirements for reduced emissions from engines are being phased in between 2010 and 2015.

The Federal Highway Administration (FHWA) has developed a tiered approach depending upon the size of a transportation project, and whether it would add capacity to area roadways or the rail system. As the Preferred Alternative would not add capacity, a quantitative analysis would not be required; however, the potential to increase MSATs will be discussed in relation to anticipated changes in vehicle miles traveled (VMT).

Regional Air Quality Status

The Atlanta Metropolitan Area fields an extensive network of 21 air monitoring sites which detect criteria pollutant levels to ensure compliance with, and monitor progress towards NAAQS attainment. A summary of air monitoring data representative of existing ambient conditions in DeKalb County are provided in Table 3.5-1. The reported 0.08 ppm eight-hour ozone background level exceeds the NAAQS of 0.075 ppm, an exceedance consistent with the nonattainment status of the Atlanta area as discussed in the following text.

Table 3.5-1: National Ambient Air Quality Standards (NAAQS)

Pollutant	Primary/ Secondary		Averaging Time	NAAQS	Background Pollutant Concentration in DeKalb County ⁽¹⁾
Carbon Monoxide	Primary		8-hour ⁽²⁾	9 ppm	1.4 ppm
			1-hour ⁽²⁾	35 ppm	1.6 ppm
Lead ⁽³⁾	Primary and Secondary		Rolling 3-month average	0.15 µg/m ³	0.006 µg/m ³
Nitrogen Dioxide	Primary		1-hour ⁽⁴⁾	100 ppb	56.7 ppb
	Primary and Secondary		Annual	53 ppb ⁽⁵⁾	33.05 ppb
Ozone ⁽⁶⁾	Primary and Secondary		8-hour ⁽⁷⁾	0.075 ppm ⁽⁸⁾	0.08 ppm
Particle Pollution	PM_{2.5}	Primary	Annual ⁽⁹⁾	12 µg/m ³	11.7 µg/m ³
		Secondary	Annual ⁽⁹⁾	15 µg/m ³	
		Primary and Secondary	24-hour ⁽⁴⁾	35 µg/m ³	22.8 µg/m ³
	PM₁₀	Primary and Secondary	24-hour ⁽¹⁰⁾	150 µg/m ³	45.3 µg/m ³
Sulfur Dioxide	Primary		1-hour ⁽¹¹⁾	75 ppb	17 ppb
	Secondary		3-hour ⁽²⁾	0.5 ppm	0.013 ppm

(1) Monitoring data were aggregated from the following sites in DeKalb County: 2390-B Wildcat Road, Decatur; DMRC, 3073 Panthersville Road, Decatur; Doarville Health Center, 3760 Park Avenue, Doraville

(2) Not to be exceeded more than once per year.

(3) Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

(4) 3-year average of the 98th percentile.

(5) The official level of the annual NO₂ standard is 0.053ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard.-year

(6) EPA revoked the 1-hour ozone standard of 0.12 ppm; however some areas have continuing obligations under that standard (anti-backsliding).

(7) 3-year average of the 4th highest daily maximum 8-hour average.

(8) In 2008 this standard was changed from 0.08 (the 1997 standard) to 0.075. The 1997 standard and its implementation rules remain in place as EPA addresses the transition between the 1997 and 2008 standards.

(9) 3-year average. New annual standard effective as of March 18, 2013.

(10) Not to be exceeded more than once per year on average over 3 years.

(11) 3-year average of the 99th percentile of the maximum 1-hour average.

Note: ppm = parts per million, ppb = parts per billion, µg/m³ = micrograms per cubic meter

Source: USEPA, 2011: www.epa.gov/air/criteria.html, accessed May 15, 2013.

Attainment Status

The air quality region which includes DeKalb County and the project area met the NAAQS for inhalable particulate matter (PM₁₀), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead (Pb); the region is in attainment for these NAAQS. The region is designated as not in attainment for the following two pollutants:

- $PM_{2.5}$ – Although the Georgia Environmental Protection Division (GAEPD) had submitted an attainment demonstration and proposed maintenance plan to EPA for the metro Atlanta area (including DeKalb County), EPA has not made a regulatory ruling as of this writing. As such, although presently monitored $PM_{2.5}$ levels fall below the NAAQS impact threshold, DeKalb County is analyzed as in nonattainment of the 1997 $PM_{2.5}$ annual standard of $35 \mu g/m^3$ in the analysis that follows.
- Ozone – DeKalb County was designated as a maintenance area for the 1997 eight-hour ozone (O_3) standard of 0.085 ppm, but did not meet the revised 2008 standard of 0.075 ppm. To fulfill regulatory requirements, both 1997 and 2008 ozone eight-hour NAAQS currently apply in DeKalb County, the former as a maintenance area and the latter, a nonattainment area.

3.5.2 Environmental Consequences

No Action Alternative

Local and regional vehicle use would be anticipated to grow between 2012 and 2025, likely increasing local congestion of area roadways. Local and regional emissions associated with the No Action Alternative are described below in comparison to the emissions associated with the Preferred Alternative. Facility air emissions at the Roybal Campus are currently controlled by a Title V permit. No changes in emissions that would affect existing permit conditions are expected in the No Action Alternative.

Preferred Alternative

As described above for the No Action Alternative, background growth would increase congestion in the area. In addition, the proposed increase in parking availability for the Roybal Campus would increase the number of employees accessing the site, increasing both local and regional emissions. Analyses were performed on both mobile (motor vehicles) and stationary (parking deck) sources as described below. Appendix C provides the technical analyses documentation for all analysis relating to air quality.

Local Air Quality

The Roybal Campus expansion would add new gasoline-fueled vehicle trips to congested Clifton Road intersections, resulting in increased tailpipe exhaust emissions during peak commute hours. In addition, the proposed parking deck would introduce additional vehicle idle and start emissions. Of the various pollutants emitted with gasoline vehicle exhaust, only CO accumulates locally and affects locations near crowded intersections, heavily traveled and congested roadways, parking lots, and garages. As CO does not persist in the atmosphere, it is analyzed as a pollutant of local air quality concern. Respirable particulate matter emitted by diesel fueled vehicle exhaust is also a pollutant of local air quality concern, and although DeKalb County is a $PM_{2.5}$ nonattainment area, the campus expansion would not add any diesel fueled vehicles; therefore particulate matter is not assessed.

Mobile CO Analysis

The prediction of vehicle-generated CO concentrations in an urban environment is dependent upon environmental and meteorological conditions, traffic characteristics and the physical configuration of each affected intersection in the Study Area. Air pollutant dispersion models simulate how meteorological, physical, and environmental characteristics of the project area affect pollutant concentrations. The prediction of CO was conducted using EPA's recommend air quality dispersion model, CAL3QHC. To ensure the most conservative prediction of pollutant concentrations, the worst-case meteorological conditions were used for wind speed and wind direction, and a neutral condition was used for atmospheric stability. Vehicular emission factors were developed using the EPA emission factor program MOVES2010b as provided by the Air Protection Branch of the GAEPD, Department of Natural Resources. All modeling assumptions are consistent with regional air quality conformity determinations.

CAL3QHC estimates the average number of vehicles that would queue during the red phase of an intersection based on the characteristics of both the intersection and the traffic flows. The model estimates the maximum 1-hour concentrations of the pollutants. The 8-hour concentration is developed by applying a persistence factor of 0.70 to the maximum 1-hour concentration. Background concentrations are then added to account for CO independent of the project, and then compared to the NAAQS.

Three locations along the Clifton Road corridor were selected for analysis – the intersections of Clifton Road with Old Briarcliff Road, HHS/CDC Parkway/Emory Point, and Houston Mill Road. These intersections are anticipated to experience the greatest project-related increase in traffic volumes with associated peak hour congestion, LOS D, E, or F, and therefore are considered reasonable worst-case scenarios. Refer to Section 3.4. Transportation for a detail discussion of traffic related impacts. It is assumed that if these intersections result in no impact from the project, then intersections with lower increase in volume or less congestion would also not be impacted. Modeling receptors were sited at multiple locations at the selected intersection along expected traffic queues where, in accordance with EPA modeling guidelines, the maximum total project concentration is likely to occur and where the general public is likely to have access. Figure 3.5-1: Air Quality Modeling Sites shows the location of each selected intersection and modeling receptor sites.

Table 3.5-2 shows the maximum predicted concentrations for CO, as compared to the existing and No Action conditions. Under the Preferred Alternative, CO concentrations would increase by only a minimal amount from existing or baseline conditions. Maximum 1-hour CO concentrations are below the NAAQS of 35 ppm, and maximum 8-hour CO concentrations are below the NAAQS of 9 ppm for all scenarios. No violations of the NAAQS are predicted for either the Preferred Alternative or the No Build Alternative.

Figure 3.5-1: Air Quality Modeling Sites

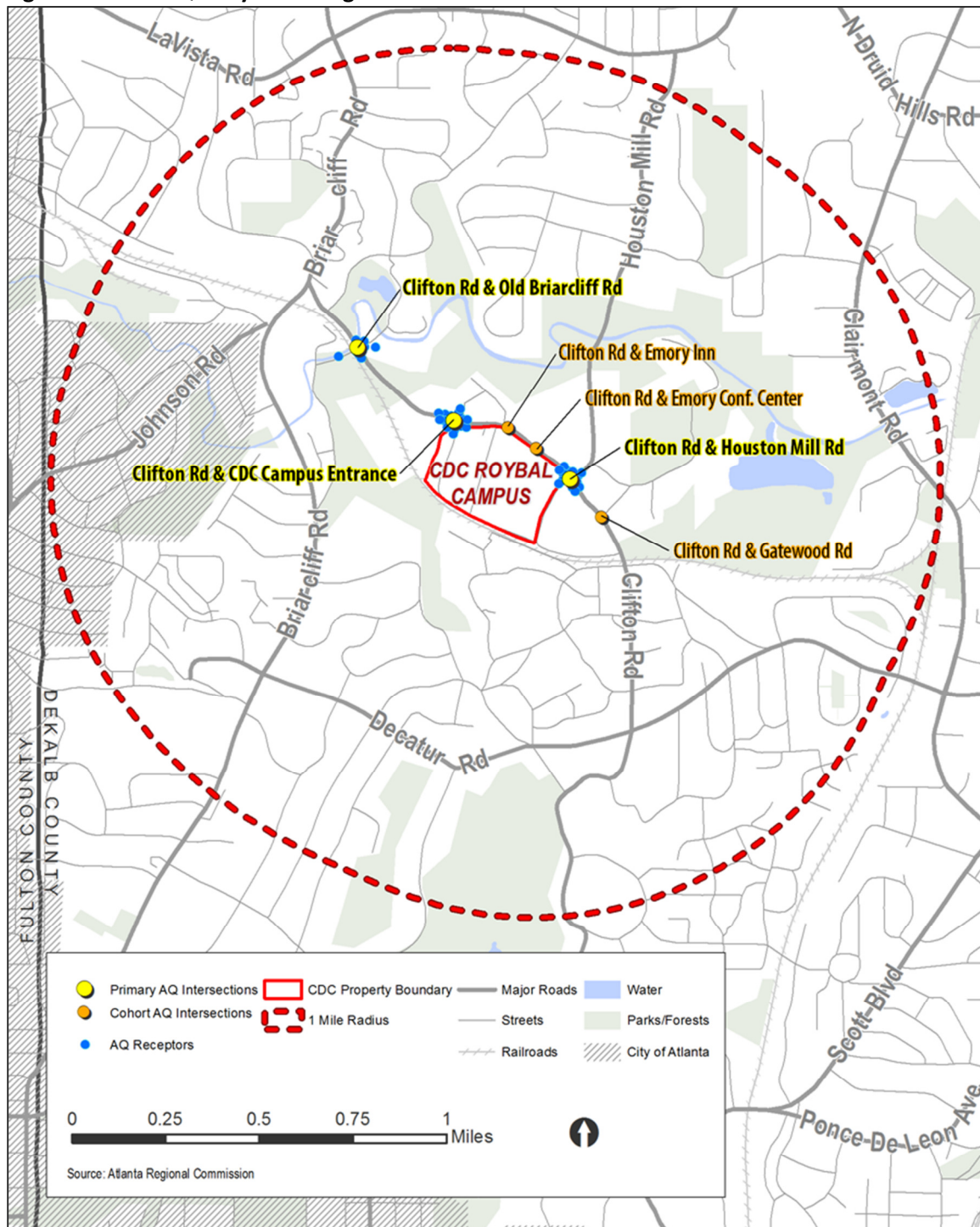


Table 3.5-2: Microscale CO Emissions

Clifton Road Intersection	NAAQS	No Action Alternative	Preferred Alternative	Increase between No Action and Preferred Alternatives
Maximum 1-hour CO Concentrations (ppm)				
Old Briarcliff Road	35	1.5	1.6	0.1
CDC Parkway/Emory Point		1.6	1.6	0
Houston Mill Road		1.5	1.7	0.2
8-hour CO Concentrations (ppm)				
Old Briarcliff Road	9	1.7	1.7	0
CDC Parkway/Emory Point		1.7	1.7	0
Houston Mill Road		1.7	1.8	0.1
Predicted concentrations include a background concentration of 1.4 ppm and 1.6 ppm for the 1-hour and 8-hour concentrations, respectively.				

Source: Jacobs, 2013

Stationary Source CO Analysis

A screening analysis was conducted for the parking deck using the EPA recommended model AERSCREEN. The results of the screening analysis were compared to the corresponding standards for CO to determine if the project would be within compliance.

A worst-case analysis was performed at the parking deck, assuming all 1,260 vehicles left within the peak hour, and that all vehicles performed a cold-start, idled for 10 minutes, and drove approximately 600 feet before exiting the parking deck.¹⁰⁷ The maximum one-hour carbon monoxide levels would be 0.6 parts per million (ppm), and the eight-hour levels would be 0.5 ppm. When added to the background levels of 1.4 ppm and 1.6 ppm for the 1-hour and 8-hour concentrations, respectively, the Preferred Alternative would comply with the corresponding NAAQS for CO, as shown in Table 3.5-3.

Table 3.5-3: Stationary Source CO Emissions

Clifton Road Intersection	NAAQS	No Action Alternative	Preferred Alternative	Increase between No Action and Preferred Alternatives
Maximum 1-hour CO Concentration (ppm)	35	1.4	2.0	0.6
8-hour CO Concentration (ppm)	9	1.6	2.1	0.5
Predicted concentrations include a background concentration of 1.4 ppm and 1.6 ppm for the 1-hour and 8-hour concentrations, respectively.				

Source: Jacobs, 2013

¹⁰⁷ For analysis purposes, a conservative net total of 1,260 new parking spaces was used to calculate peak hour vehicle parking, to account for any potential modification in final parking design.

Regional Air Quality

A regional (or mesoscale) analysis was conducted to assess the net effects of the project on the emissions of pollutants. Projects, such as the Campus expansion, located in nonattainment areas must prove that they conform to the CAA, which means they would not cause or contribute to any new localized violations of CAA standards, nor increase the frequency or severity of any existing violations within the study area region. The General Conformity Regulations (GCR), promulgated by EPA, provides the project conformity criteria framework for non-transportation federal agencies.

This analysis assessed the change in regional air quality based on the increase in vehicle-related emissions. Relative differences in vehicle-related emissions were a function of the net change in VMT, average vehicle travel speed, and the corresponding pollutant emission rates. The emission rates for vehicles were determined for the project's build year of 2025 using EPA's model MOVES2010b as provided by the Air Protection Branch of the Georgia Environmental Protection Division, Department of Natural Resources.

Two pollutants associated with passenger vehicles were assessed in the mesoscale analysis: volatile organic compounds (VOC) and nitrogen oxides (NO_x). Volatile organic compounds and nitrogen oxides are included because of their role as precursors for ozone (O₃); ozone is formed through a series of reactions involving volatile organic compounds and nitrogen oxides in the presence of sunlight. By calculating the change in the emissions for volatile organic compounds and nitrogen oxides, the effect of the Preferred Alternative on ozone would be assessed indirectly. Although DeKalb County is a PM_{2.5} nonattainment area, the Preferred Alternative would not add any diesel fueled vehicles; therefore particulate matter is not assessed.

The increase in regional emissions for No Action Alternative and Preferred Alternative is shown in Table 3.5-4. These increases are less than the 100 ton/year *de minimis* threshold level for each pollutant. Therefore, the project is considered to satisfy the General Conformity Regulations.

Table 3.5-4: Increase in Regional Emissions

	VOC (tons/year)	NO _x (tons/year)
Operations Emissions 2025 No Action	1.16	3.23
Operations Emissions 2025 Preferred Alternative	1.28	3.42
Delta Emissions due to Preferred Alternative	+0.12	+0.19
<i>Threshold</i>	<i>100</i>	<i>100</i>
Does Design Year Delta Exceed Threshold?	No	No

Source: 40 CFR 93 § 153, USEPA; Jacobs, 2013

Mobile Source Air Toxics

MSAT emissions are directly related to fuel usage, so the annual fuel usage for each alternative was compared. The estimated fuel usage for the Preferred Alternative is approximately 10 percent higher than for the No Action Alternative; and 22 percent higher than for the Existing Conditions (refer to Table 3.5-5). However, emissions would likely be lower than present levels in the design year as a result of USEPA's national control programs, which include clean diesel technologies for locomotive engines and

the use of ultra-low sulfur diesel fuel. Although, the Preferred Alternative would result in an increase in fuel usage, the project related MSAT emission levels would likely be lower as a result of future technological improvements of newer vehicles.

Table 3.5-5: Increase in Vehicle Miles Traveled

Parameter	2012	2025		% Change Between Existing and Preferred Alternative	% Change Between No Action and Preferred Alternative
	Existing	No Action Alternative	Master Plan Alternative		
VMТ (in 1,000s)	48.2	56.0	61.8	22%	10%

Source: HHS/CDC Employee Travel Habit Survey, 2013; Jacobs, 2013

New Source Review Applicability

New Source Review (NSR) is a permitting process required for proposed facilities that have the potential to emit (PTE) a significant amount of regulated pollutants. NSR permits would require pre-construction commitments to stringent process-based emission limitation protocols and/or the installation of advanced air pollution control equipment.

Stationary source air emissions at the Roybal Campus are currently controlled by a Title V permit, which establishes operational limits for major source emitters on the types and amounts of air pollution allowed, operating requirements for pollution control devices or prevention activities, and monitoring and record keeping requirements. The Preferred Alternative proposes to construct a new laboratory building and parking deck. Neither of these additions was determined to require new boiler capacity or back-up power systems, as the existing Roybal Campus energy budget would sufficiently support both new facilities within Title V permit operational parameters. As a result, no new energy system emissions are predicted to occur from the proposed new facilities and NSR is not applicable.

A PTE analysis of vehicular CO, NO_x, and VOC emissions from the proposed parking deck was conducted. To determine its capability at maximum design capacity to emit regulated pollutants, all 1,260 parked vehicles were assumed to cold-start after an eight hour “soak” period, idled for 10 minutes and drove an average of 600 feet to the parking deck exit, and all departed the parking deck within the peak hour. These modeling assumptions were used as inputs to the EPA emission factor program MOVES2010b to produce emission rates indicative of a worst-case PTE scenario. Table 3.5-6 shows the maximum predicted vehicular emissions for CO, NO_x, and VOC from the proposed parking deck. Although the Roybal Campus is currently a major source of CO and NO_x, the predicted additional increase in emissions from the parking deck is insignificant and would not be subject to the provisions of NSR permitting regulations.

Table 3.5-6: Maximum Potential to Emit

Pollutant	Total Maximum Potential Emissions (tons/yr) ¹			Contribution from Proposed Parking Deck	New Source Review Applicability	
	Existing Conditions	No Action Alternative	Master Plan Alternative		Major Source Threshold (tons/yr)	Major Source?
CO	127.26		134.05	6.79	100	Yes
NO _x	145.75		145.92	0.17	25	Yes
VOC	7.5		7.79	0.29	25	No

1. Includes emissions from all Campus boilers, generators, and incinerators.

Source: Title V Operating Permit Renewal Application, Trinity Consultants, 2008; Jacobs, 2013.

Implementation of the Preferred Alternative would not cause nor contribute to any new localized violations nor increase the frequency or severity of any existing NAAQS violations. Therefore, the Preferred Alternative would not result in a significant adverse impact on air quality.

3.6 Noise

3.6.1 Affected Environment

Noise Fundamentals

Environmental noise is defined as the sound in a community emanating from man-made sources such as automobiles, trucks, buses, aircraft, trains, and fixed industrial sources, or from natural sources such as animals and wind. Sound levels are measured in logarithmic units called decibels (dB). An overall measurement of sound results in a single decibel value that describes the sound environment, taking all frequencies (itches) into account. The human ear, however, does not sense all frequencies in the same manner. The “A”-weighted scale (expressed in dBA units) was developed to closely approximate the human sensory response from highway-related noise.

Since an instantaneous noise measurement (measured in dBA) describes noise levels at just one moment of time, and since very few noises in a community area are constant, other descriptors are used to represent varying sound levels over extended periods of time. The noise level descriptor used for this project is the hourly equivalent sound level, Leq. Leq is the steady-state, A-weighted sound level, which contains the same amount of acoustic energy as the actual time-varying, A-weighted sound level over a one-hour period.

Outdoor Sound Levels	Sound Level (dBA)	Indoor Sound Levels
	110	Rock band at 5 m (16 ft)
Jet over flight at 300 m (1,000 ft)	105	
	100	Inside New York subway train
Gas lawn mower at 1 m (3 ft)	95	
	90	Food blender at 1 m (3 ft)
Diesel truck at 15 m (50 ft)	85	
Noisy urban area — daytime	80	Garbage disposal at 1 m (3 ft)
	75	Shouting at 1 m (3 ft)
Gas lawn mower at 30 m (100 ft)	70	Vacuum cleaner at 3 m (10 ft)
Suburban commercial area	65	Normal speech at 1 m (3 ft)
	60	
Quiet urban area — daytime	55	Quiet conversation at 1 m (3 ft)
	50	Dishwasher in next room
Quiet urban area — nighttime	45	
	40	Empty theater or library
Quiet Suburb — nighttime	35	
	30	Quiet bedroom at night
Quiet Rural Area — nighttime	25	Empty concert hall
Rustling leaves	20	
	15	Broadcast and recording studios
	10	
	5	
Reference pressure level	0	Threshold of hearing

mPA MicroPascals describe pressure. The pressure level is what sound level monitors measure.
dBA A-weighted decibels describe pressure logarithmically with respect to 20 mPa (the reference pressure level).
Source: Highway Noise Fundamentals, Federal Highway Administration, September 1980.

Figure 3.6-1: Common Outdoor and Indoor Sound Level

Usually, public reaction to noise levels is a function of location (urban, suburban, rural), time of day, fluctuation of noise levels, duration, and individual judgment of the listener. Under normal conditions, a change in noise level of 3 dBA is required for the average person to perceive a difference. A decrease of 10 dBA appears to the listener to be a halving of noise levels, while an increase of 10 dBA appears to be a doubling of the noise. A list of common noise sources and their associated sound levels are shown in Figure 3.6-1: Common Outdoor and Indoor Sound Level.

Noise Impact Criteria

The following two types of noise could be associated with the Preferred Alternative:

- Mobile source noise along nearby roadways, associated with an increase in vehicles accessing the site.
- Stationary source noise associated with building operation and construction.

The FHWA and GDOT criteria were used to assess the potential for mobile source noise impact. The FHWA has established Noise Abatement Criteria (NAC) to identify noise impacts from roadway projects (refer to Table 3.6-1). Federal regulation 23 CFR § 772 states that: “Noise impacts occur when the predicted traffic noise levels approach or exceed the noise abatement criteria levels, or when the predicted traffic noise levels substantially exceed the existing noise levels.”

Table 3.6-1: Noise Abatement Criteria (NAC)

Activity Category	$L_{eq}(h)^*$	Description of Activity Category
A	57 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B**	67 (exterior)	Residential
C**	67 (exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails and trail crossings.
D	52 (interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E**	72 (exterior)	Hotels, motels, offices, restaurant/bars, and other developed lands, properties or activities not included in A-D or F.
F	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	--	Undeveloped lands that are not permitted.
<p>* $L_{eq}(h)$ is an energy averaged, one-hour, A-weighted noise level in decibels (dB(A)). The $L_{eq}(h)$ Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.</p> <p>** Includes undeveloped lands permitted for this Activity Category.</p> <p>Source: 23 CFR § 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise.</p>		

A traffic noise impact is defined by GDOT as either approaching or exceeding the FHWA Noise Abatement Criteria (NAC). For residential areas and active parklands the NAC is 67 dBA, while for commercial areas the NAC is 72 dBA. Because GDOT defines “approach” as one decibel below the NAC, 66 and 71 dBA would constitute an impact for residential and commercial developments, respectively. Additionally, if the Build year sound levels are increased by at least fifteen decibels over existing conditions at any receptor location, GDOT would rule the sound levels at these receptors to be substantially exceeded and consider such locations as impacted.

The DeKalb County Noise Ordinance was reviewed to assess the potential for impact due to stationary source noise. The ordinance specifies that during the day, between 7:00 a.m. and 10:00 p.m., the sound level at the neighboring property shall not exceed 60 dBA, and during the nighttime, between 10:00 p.m. and 7:00 a.m., the sound shall not exceed 50 dBA. The ordinance also limits construction work to the hours of 7:00 a.m. to 10:00 p.m. Permits or special variances could be obtained should it be deemed necessary to work beyond those hours.

The closest residential use is the Sorority Village at Emory University, located approximately 500 feet from the Roybal Campus. Given this distance and the limited noise expected to occur from the Preferred Alternative improvements, the noise associated with the facility operations would not be perceptible. Noise associated with construction of the facility is discussed qualitatively in Section 3.13. Construction Impacts.

Noise Monitoring Program

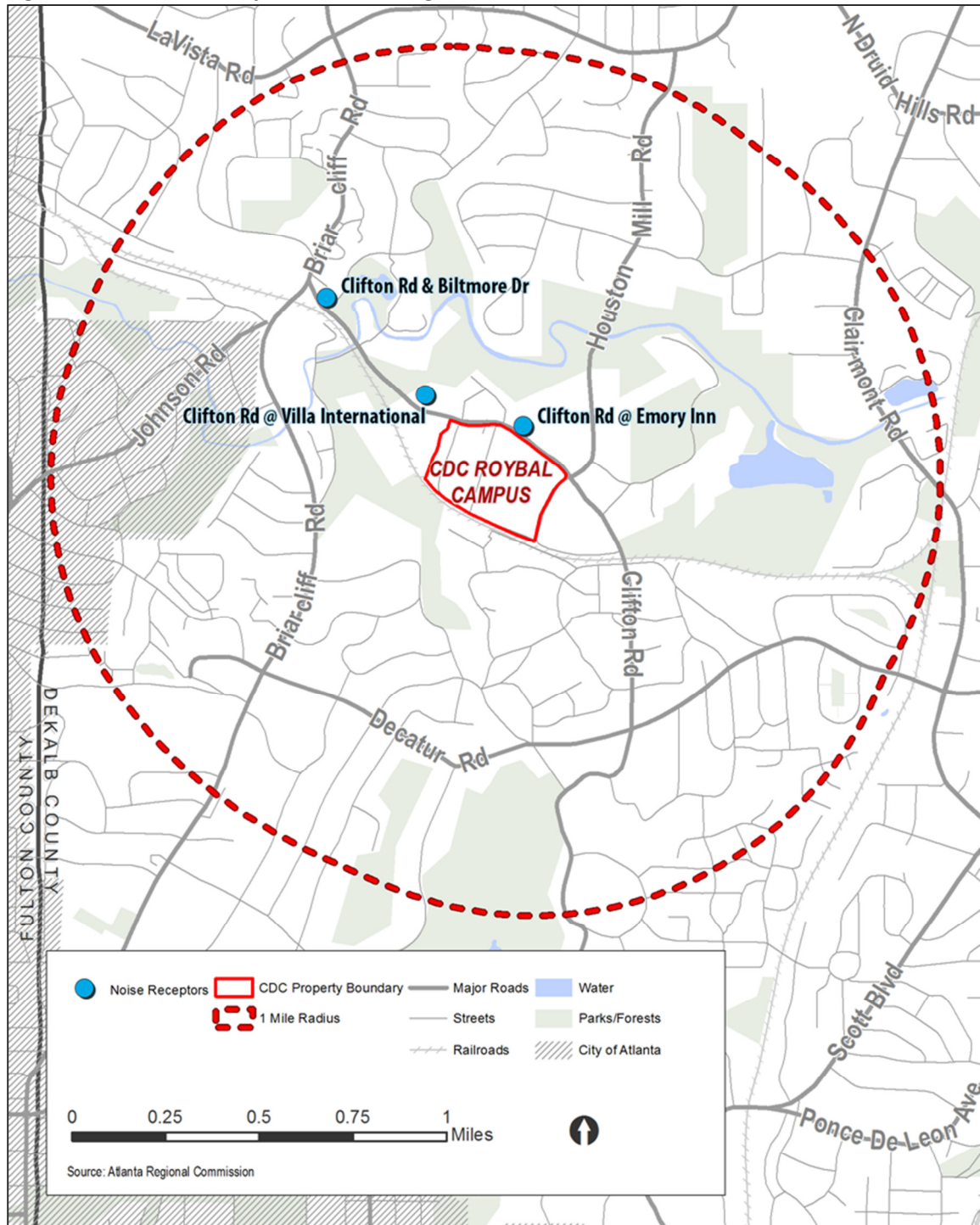
Noise monitoring was conducted at three locations to determine the existing sound levels in the Study Area and to validate the accuracy of the noise model in predicting traffic noise levels within the Study Area. As shown in Figure 3.6-2: Noise Receptors/Monitoring Locations, accessible areas near the noise receptor locations were chosen for noise monitoring. Noise monitoring data sheets are provided in Appendix D.

Noise monitoring was performed on April 2 and 3, 2013 during both the morning (7:30 to 9:00 a.m.) and evening (5:00 to 6:30 p.m.) peak periods, during times when traffic was heavy but flowing freely. One 20-minute measurement was taken at each site during both the evening and morning monitoring periods. A Bruel and Kjaer Model 2236 sound analyzer was used to measure existing sound levels. The analyzer was calibrated then tripod-mounted and equipped with a wind screen to eliminate noise associated with wind blowing across the microphone. The weather was dry, mid 60’s with average humidity.

Traffic volume, speed, and composition data were collected simultaneously with noise monitoring to validate the noise model. This data, as well as roadway and terrain geometries was used to develop a model of the area using FHWA’s Traffic Noise Model (TNM) noise prediction software, version 2.5. The resulting modeled traffic noise levels were compared with the monitored traffic noise levels. This was to ensure that changes between future and existing conditions were due solely to changes in conditions and did not erroneously reflect discrepancies due to modeling and monitoring techniques. It is generally acceptable to have a difference between the monitored and modeled traffic noise levels of up to 3 dBA.

Table 3.6-2 summarizes the results of the field monitoring program, comparing the monitored traffic noise levels to the TNM modeled traffic noise levels. For all of the monitored sites, the model-predicted

Figure 3.6-2: Noise Receptors/Monitoring Locations



traffic noise levels were within 2 dBA of the monitored traffic noise levels; indicating that the model may be used to accurately calculate traffic noise levels within the Study Area.

Table 3.6-2: Monitored Traffic Noise Levels and Validation of the TNM Model [Leq(h),dBA]

Location	Time Period	Monitored Sound Level	TNM Modeled Sound Level	Difference
Biltmore Drive and Clifton Road	AM	60	61	1
	PM	59	60	1
Villa International at Clifton Road	AM	57	55	2
	PM	56	57	1
Emory Inn at Clifton Road	AM	57	57	0
	PM	57	58	1

Source: Jacobs, 2013.

Existing Noise Levels

Peak hour traffic data, including speeds and vehicle mix, was entered for each time period to estimate the existing sound levels (Refer to Table 3.6-3). The speeds observed during monitoring were averaged for each roadway and used for the peak period in the model. The traffic data used for the analysis is described in Section 3.4. Transportation.

Table 3.6-3: Modeled Existing Sound Levels [Leq(h), dBA]

Location	NAC Category	Criteria L _{eq} (h) exterior	Time Period	Existing Sound Level
Biltmore Drive and Clifton Road	B	67 (exterior)	AM	62
			PM	61
Villa International at Clifton Road	B	67	AM	58
			PM	58
Emory Inn at Clifton Road	E	72	AM	59
			PM	59

Source: Jacobs, 2013.

The existing sound levels range between 58 and 62 dBA, below the NAC B threshold of 66 dBA for residences, and below the NAC E threshold of 71 dBA for hotels. These existing levels were used to evaluate the Preferred Alternative and its effect on traffic noise at the four receivers indicated above.

3.6.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, background traffic volumes would increase to reflect expected growth in overall travel through and within the area, major real-estate developments, institutional expansions, and roadway physical and/or operational system changes scheduled to be occupied or implemented by 2025. The change in sound level associated with this increase is shown in Table 3.6-4.

Preferred Alternative

Under the Preferred Alternative, the new parking deck would result in a net increase of approximately 1,200 new, on-campus parking spaces which are expected to be used at full capacity. Table 3.6-4 shows the sound levels associated with the Preferred Alternative, in comparison to the Existing and No Action Alternative sound levels. The change in sound level associated with this increase is shown in Table 3.6-4. As can be seen in Table 3.6-4, the proposed increase in vehicle trips as a result of the Preferred Alternative would not result in any increase to sound levels above the impact criteria levels; and would therefore have no impact on adjacent noise-sensitive receivers.

Table 3.6-4: Modeled Sound Levels Existing, No Action and Preferred Alternative [Leq(h), dBA]

Location	NAC Category	Criteria Leq (h)	Time Period	Existing Sound Levels	No Action Alternative Sound Level	Preferred Alternative Sound Levels
Biltmore Drive and Clifton Road	B	67 (exterior)	AM	62	63	63
			PM	61	62	63
Villa International at Clifton Road	B	67 (exterior)	AM	58	58	59
			PM	58	59	59
Emory Inn at Clifton Road	E	72 (exterior)	AM	59	60	60
			PM	59	60	61

Source: Jacobs, 2013

3.7 Cultural Resources

3.7.1 Affected Environment

This section evaluates the potential impacts of the Preferred Alternative upon historical and archaeological resources. An overview of cultural resources and inventory of historic resources in the Study Area are provided based on previously-conducted cultural resources investigations and ongoing data collection. Typically, potential effects on historic resources include direct physical impacts (i.e., demolition, alteration, or damage from nearby construction) and indirect impacts such as the introduction of audible, visual, or contextual elements that are out of character with a property or that alter its setting.

Cultural Resources Investigation

Two cultural resources reports were prepared prior to the completion of the master planning process. An initial Cultural Resources Assessment (CRA) titled *Atlanta's Temple for Public Health Centers for Disease Control* was prepared in August 2009 for all of the HHS/CDC's Atlanta facilities to assist the HHS/CDC in complying with the National Historic Preservation Act (NHPA) of 1966 (16 U.S.C. 470), as amended, Executive Orders 11593 and 13287, as well as pertinent state and federal regulations. The CRA was conducted to identify and assess the potential for National Register eligible structures or those that may possess exceptional historical significance.¹⁰⁸ This initial CRA concluded that the Roybal Campus contained a historic district, comprised of several first-generation HHS/CDC structures (Buildings 1 Main, 1 East, 1 South, 3, 6, and 10), determined to be eligible for listing on the National Register of Historic Places (NRHP) under Criteria A and C.¹⁰⁹

At the time the CRA was conducted in 2009, plans were in place to demolish five of the NRHP-eligible buildings on the Roybal Campus and as a result, Section 106 compliance was initiated. The HHS/CDC is required to operate modern laboratories and support facilities that reflect the nation's changing research focus and needs. It must also adhere to security practices that are currently in place. These buildings, which formerly housed HHS/CDC functions from 1958 through 2000, were considered outdated, functionally obsolete structures that were not able to accommodate the existing or future mission needs of the HHS/CDC. Consequently, the retention of these buildings was not under

¹⁰⁸ Districts, buildings, structures and objects are eligible for the National Register if they possess integrity of location, design, setting, materials, workmanship, feeling and association and are associated with events that have made a significant contribution to the broad patterns of our history; or are associated with significant persons of our past; or embody distinctive characteristics of a type, period, method of construction or that represent the work of a master, possess high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction; or that have yielded or may be likely to yield information important in prehistory or history (National Register of Historic Places, 36 Code of Federal Regulation (CFR) Parts 60 and 63 (1994)). Properties that are less than 50 years old are generally not eligible for listing unless they have achieved exceptional significance. Determinations of eligibility are made by Georgia's Department of Natural Resources Historic Preservation Division (HPD).

¹⁰⁹ The four NRHP criteria include properties that: (a) are associated with events that have made a significant contribution to the broad patterns of our history; (b) that are associated with the lives of persons significant in our past; or (c) that embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or (d) that have yielded, or may be likely to yield, information important in prehistory or history.

consideration.¹¹⁰ As such, the HHS/CDC and Georgia HPD entered in to a Memorandum of Agreement (MOA) to ensure that appropriate measures were undertaken to mitigate the staged demolition of five eligible buildings (Buildings 1 Main, 1 East, 1 South, 3, and 6) in the historic district. The MOA, executed in the Fall of 2008, specified the following:¹¹¹

- Photographic documentation and historical narrative pursuant to the Secretary of Interior's professional standards (36 C.F.R. § 61);
- Inclusion of original as-built drawings and historic maps in the HHS/CDC Library's permanent collection;
- Interpretive displays documenting the significance of early HHS/CDC buildings; and
- Development of a website that includes a history of the HHS/CDC's mission as well as building narrative and photography.

Furthermore, ongoing consultation between the parties was agreed to for areas in which the MOA applies and a report summarizing work undertaken pursuant to the terms of the MOA would be submitted to HPD. This reporting includes any scheduling changes proposed, problems encountered, and disputes and objections received in the HHS/CDC's efforts to implement the terms of the MOA. The terms of the MOA, signed in fall 2008, remain in effect (See Appendix E). All stipulations of the MOA have been completed to date aside from the development of the webpage, which is to be completed by 2014.

Facility development continued at the various HHS/CDC Atlanta campuses upon completion of the initial CRA in 2009. As a result, an update to the initial CRA titled *Cultural Resources Assessment 2007-2012* (also known herein as the "CRA Update") was completed for these facilities in November 2012. The intent of the CRA Update was to provide an overview of the campus development that occurred since the completion of the initial CRA and to evaluate any properties within the facilities that were not previously assessed as historic resources but now meet the 50-year age requirement of the NRHP.¹¹²

The CRA Update indicated that the Roybal Campus experienced extensive construction and modifications during the previous ten years. These included a laboratory, office buildings, and visitor center completed in 2004 and 2005. In 2011, two buildings (Buildings 24 and 25) were constructed with a new multi-story parking garage. The current architecture on the Roybal Campus is predominantly characterized by curved glass buildings with contemporary design and landscaping that reflect the modern, progressive approach of the HHS/CDC in the twenty first century. As a result, the CRA Update indicated that the Roybal Campus does not resemble the late 1950s institutional complex that the campus once was. The only historic building remaining on campus is Building 10 which was part of the NRHP eligible district referenced above. This boiler/mechanical facility was originally designed as an L-shaped building with a flat roof, red brick façade and circular smokestack. Building 10 was associated with the construction of the original Roybal Campus buildings and its original design has been altered through the construction of additions approximately four times since the mid-1960s.¹¹³

¹¹⁰ New South Associates. *Atlanta's Temple of Public Health Centers for Disease Control Cultural Resource Assessment DeKalb and Gwinnett Counties, Georgia*. August 28, 2009. p.203.

¹¹¹ Memorandum of Agreement Between the Centers for Disease Control and Prevention and the Georgia State Preservation Officer Regarding Historic District, Edward G. Roybal Campus, Atlanta, Georgia. September 2008

¹¹² New South Associates. *Cultural Resources Assessment, 2007-2012: National Institute for Occupational Safety and Health (NIOSH) of the Centers for Disease Control and Prevention Atlanta Facilities*. November 30, 2012. p. i.

¹¹³ Ibid., pp. 4-5.

Since Building 10 is no longer part of the larger historic district, portions of which were used for modern replacement facilities, it was re-evaluated on its individual merits as an NRHP property. The CRA Update concluded that Building 10 does not retain the level of integrity of design, materials, workmanship, and feeling necessary to convey its significance as a former part of the original Roybal Campus. As such, individual NRHP eligibility for Building 10 was not warranted.¹¹⁴

In addition, the CRA, conducted in 2009, determined that the Roybal Campus has a low potential for archaeological sensitivity based on a reconnaissance survey and literature review. The reconnaissance indicated that previous construction, additions, and modifications to the campus have resulted in a high degree of site disturbance, with nearly all parts of the Roybal Campus having been disturbed. The CRA Update confirmed these findings. As a result, the Roybal Campus maintains a low potential for intact archaeological resources and no further archaeological study of the campus is warranted.¹¹⁵

Historic Resources within Study Area

An inventory of historically-significant properties within the Study Area was compiled based on a review of the National Register of Historic Places (NRHP) listing for DeKalb County and Georgia's Natural, Archaeological and Historic Resources Geographic Information System (GNAHRGIS). Historic resources within the Study Area are described as follows (see Figure 3.7-1: Cultural/Historic Resources):

Briarcliff, also known as Asa G. Candler, Jr. House (NRHP No. 88001167, added 1988). This 42-acre property was once the estate of Asa Candler, Jr. The property was sold to the GSA in 1948 with the intention of developing the property as a VA hospital. Although the VA hospital never materialized, this property formerly housed the DeKalb County Addiction Center and later the Georgia Mental Health Institute in the 1960s. This property was acquired by Emory in the fall of 1998 and is now known as the University's Briarcliff Campus.¹¹⁶

Briarcliff-Normandy Apartments (NRHP No. 03000136, added 2003). This resource along Briarcliff Road between Normandy Drive and Chalmette is located in the southern extent of the Study Area. This apartment complex is built in a modern style and is sited amongst landscaped areas.

Druid Hills Historic District (NRHP No. 79000715, added 1979). This district features residences designed in a number of revivalist and eclectic architectural styles including Georgian, Tudor and Italian Renaissance design. Druid Hills, known as Atlanta's second suburb after Inman Park, was designed by Frederick Law Olmstead, whose plan featured a broad and curving avenue (Ponce de Leon), public open space, and large estates.¹¹⁷ This district is generally bounded by Briarcliff Road to the west, Emory Road to the north, Clifton Road south of North Decatur Road to the east and portions Ponce de Leon Avenue to the

¹¹⁴ Ibid., p. 5.

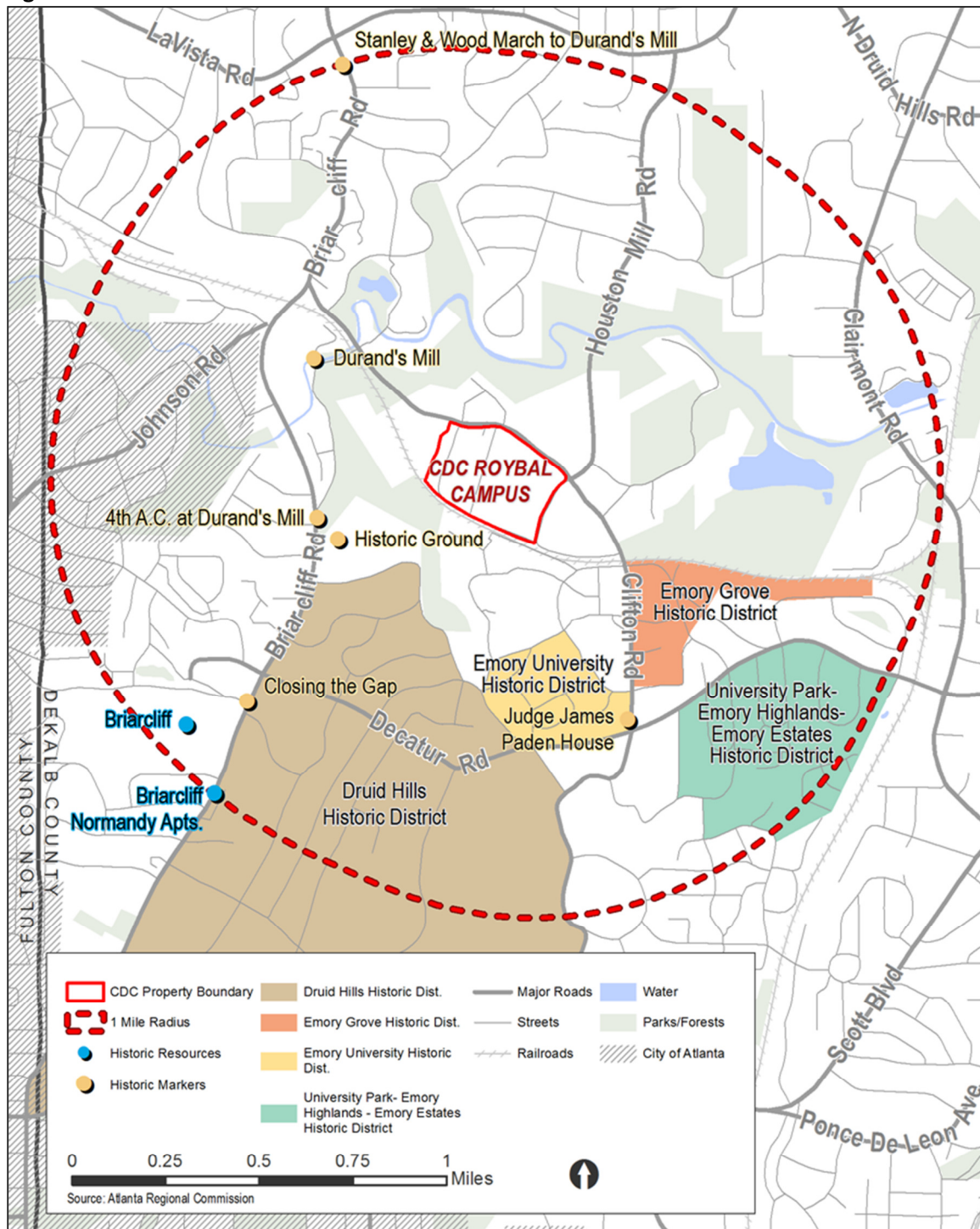
¹¹⁵ Ibid.

¹¹⁶ Emory University. *Emory History: Places & Schools: Campuses, Briarcliff Campus.*

<http://emoryhistory.emory.edu/places/campuses/CampusBriarcliff.html> (April 22, 2013).

¹¹⁷ National Park Service. *Druid Hills Historic District.* <http://www.nps.gov/nr/travel/atlanta/dru.htm> (April 22, 2013).

Figure 3.7-1: Cultural Historic Resources



south. The Druid Hills Historic District also encompasses the Druid Hills Parks and Parkways Historic District which was added to the NRHP in 1975 (NRHP No. 75002070).

The Druid Hills neighborhood is also designated as a local historic district (Druid Hills Local Historic District) under the *1994 DeKalb County Historic Preservation Ordinance*. This district is subject to design and preservation guidelines and falls under the jurisdiction of the DeKalb County Historic Preservation Commission. The boundaries of the local historic district are co-terminus with those of the Druid Hills Civic Association, established in 1938.¹¹⁸

Emory Grove Historic District (NRHP No. 00000300, added 2000). This approximately 90-acre district is comprised of bungalow style residences built in the late 1930s and 1940s. Structures within the district are defined by Colonial Revival and Late Gothic Revival architectural styles. The Emory Grove Historic District is situated along portions of North Decatur Road between the CSX right-of-way and includes roadways such as Princeton Way, Westminster Way, and Edinburgh Terrace.

Emory University District (NRHP No. 75002071, added 1975). This district encompasses the Emory University Campus, designed by Henry Hornbostel. The original campus design incorporated natural gardens with buildings constructed in a modern Italianate style. Original campus buildings featured arched windows in combination with pink and gray Georgia marble set in a random "quilt-like" pattern. The campus buildings complimented their surroundings through the use of indigenous materials, such as quarried Georgia marble slabs, and by integrating the building into the landscape.¹¹⁹ Additionally, the campus relates to the Olmstead-designed Druid Hills neighborhood located immediately adjacent to Emory.

University Park-Emory Highlands-Emory Estates Historic District (NRHP No. 97001638, added 1998). This district is significant as it features a number of architectural styles found in Georgia during the first half of the 20th century. These include: Craftsman style bungalows, Colonial Revival residences, and English Vernacular cottages. The historic district, developed in three phases between 1916 and 1943, is characterized by design elements that are similar to those found in Druid Hills such as curved streets, landscaping, and granite curbs. The University Park-Emory Highlands-Emory Estates Historic District is unique in that it is uniform in size and the street grid, while featuring curved elements, is laid out on a north-south axis. The smaller lot size typical of this district reflects an increased demand for moderate housing in the early 20th century and is significant in terms of community planning. Additionally, the growth of Emory during the first half of the 20th century, solidified the need for moderately priced housing for its staff and faculty.¹²⁰

Historic Markers within Study Area

The Georgia Historical Marker Program is a mechanism used to preserve and recognize significant historic events in the State of Georgia. In order to be nominated for these interpretive markers, sites of special events, buildings, or structures must be over 50 years old or individuals nomination must be

¹¹⁸ The Jaeger Company prepared on behalf of the Druid Hills Civic Association. *Design Manual for Druid Hills Local Historic District: Part One The District & The Process*. April 1997.

¹¹⁹ National Park Service. *Emory University District*. <http://www.nps.gov/nr/travel/atlanta/emo.htm> (April 23, 2013).

¹²⁰ National Register of Historic Places. *University Park-Emory Highlands-Emory Estates Historic District, DeKalb County, Georgia, Continuation Sheet Section 8 – Statement of Significance*. p. 7.

deceased for 25 years or more.^{121,122} Historic markers within the Study Area were identified based on a review of sources including GALILEO (Georgia Library Learning Online), the University System of Georgia's virtual library; the Digital Library of Georgia; and ARC GIS datasets. Markers are identified in Figure 3.7-1: Cultural/Historic Resources and briefly described below.

Closing the Gap. This historical marker, dedicated by the Georgia Historical Commission in 1954, recognizes troop movements associated with the Battle of Peachtree Creek and the Atlanta Campaign during the Civil War. This marker is located on Briarcliff Road in the vicinity of University Drive.

Historic Ground. This marker, posted in 1966, is located at Briarcliff Road south of Old Briarcliff Road. This marker signifies the route of General Sherman's Federal Army towards Atlanta as well as General Howard's 4th Corps occupation of an entrenched camp near this location.¹²³

4th A.C. at Durand's Mill. This area was significant due to federal troop movements, positioned at the direction of Sherman, during their advance upon Atlanta.¹²⁴ This marker, located at Briarcliff Road and Old Briarcliff Road, was dedicated in 1967.

Durand's Mill. This marker on Old Briarcliff Road between Briarcliff and Clifton Roads was dedicated by the Georgia Historical Commission/Department of Natural Resources in 1997. Durand's Mill was a water-powered factory and saw mill that operated in the mid to late 1800s. This area was also significant due to federal troop movements during their advance upon Atlanta.¹²⁵

Stanley and Wood March to Durand's Mill. Commissioned in 1988, this marker is located on Briarcliff Road, south of LaVista Road. Stanley and Wood marched troops from Buckhead to this area in order to seal an existing gap in federal troop deployment. Both columns of troops marched along LaVista Road before turning south and crossing Peachtree Creek at Durand's Mill.¹²⁶

Judge James Paden House: Gen. J.D. Cox's Headquarters. This historical marker at Clifton Road and North Decatur is significant as it represented the northeast sector of Sherman's approach to Atlanta.

3.7.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, the implementation of the Master Plan would not occur. Historic resources within the Study Area would remain similar to existing conditions. No disturbance or

¹²¹ Georgia Historical Society. *Georgia Historical Marker Program*. <http://www.georgiahistory.com/containers/141> (May 14, 2013).

¹²² Nominations under this program must be sponsored by at least one entity such as a historical association, church, school, government, or corporation

¹²³ GALILEO. GeorgiaInfo. *Georgia Historical Markers: Historic Ground*.

<http://georgiainfo.galileo.usg.edu/gahistmarkers/historicgroundhistmarker3.htm> (May 14, 2013).

¹²⁴ Georgia Historical Society. *Historical Marker Index: Durand's Mill*. <http://www.georgiahistory.com/markers/2908> (May 14, 2013).

¹²⁵ Georgia Historical Society. *Historical Marker Index: Durand's Mill*. <http://www.georgiahistory.com/markers/2908> (May 14, 2013).

¹²⁶ Georgia Historical Society. *Historical Marker Index: Stanley and Wood March to Durand's Mill*. <http://www.georgiahistory.com/markers/2950> (May 14, 2013).

alterations to existing cultural or historic resources or historic markers within the Study Area would occur.

Preferred Alternative

As noted in Section 3.2. Land Use, Zoning and Public Policy, the HHS/CDC has engaged in a series of development activities over the last decade in order to modernize the Roybal Campus to a condition in which it could accommodate its response to various global health needs/crises and also adequately address HHS/CDC's enhanced security and safety criteria developed after the terrorist attacks of September 11, 2001. HHS/CDC has recently coordinated its development activities and master planning process with HPD in order to identify and assess the potential for National Register eligible structures in compliance with the NHPA of 1966. As part of this effort, two cultural resource studies were conducted for the Atlanta area facilities under the jurisdiction of the HHS/CDC. The initial CRA, prepared in 2009, identified a historic district comprised of several first-generation HHS/CDC buildings on the Roybal Campus. At the time the CRA was conducted in 2009, plans were in place to demolish five of the NRHP-eligible buildings on the Roybal Campus and as a result, Section 106 compliance was initiated. These buildings, which formerly housed HHS/CDC functions from 1958 through 2000, were considered outdated, functionally obsolete structures that were not able to accommodate the existing or future mission needs of the HHS/CDC. As such, the retention of these buildings was not under consideration.¹²⁷

Subsequently, the HHS/CDC and Georgia HPD entered in to a Memorandum of Agreement (MOA) to ensure that appropriate measures were undertaken to mitigate the staged demolition of five eligible buildings (Buildings 1 Main, 1 East, 1 South, 3, and 6) in the historic district. While the terms of the MOA, remain in effect, most of the stipulations have been fulfilled.

A CRA Update, completed in November 2012, provided a five year update of HHS/CDC's Atlanta facilities in accordance with Section 110 of the NHPA. This updated study indicated that of the HHS/CDC area facilities, the Roybal Campus has undergone the most change as a result of construction activities since the initial CRA in 2009. The study also concluded that the Roybal Campus no longer contains buildings that are NRHP-eligible. Building 10, the Boiler/Mechanical facility, is not considered individually eligible for the NRHP due to extensive additions over time and the demolition of the five properties, once proximate to Building 10, which comprised the historic district identified in the initial CRA.

The Roybal Campus was determined to have low potential for archaeological resources based on a literature review and reconnaissance survey completed as part of the previously-conducted cultural resources investigations. The development of and modifications to the Roybal Campus have resulted in extensive site disturbance on nearly all parts of the campus grounds. As a result, there is low potential for eligible intact archaeological resources. Any proposed improvements, as identified in the Master Plan, would be confined to previously disturbed areas of the campus. Based on these conditions, no additional archaeological investigations are recommended as a result of the Master Plan Alternative improvements.

Improvement proposed under the Preferred Alternative would be limited to the self-contained Roybal Campus. The HHS/CDC has determined that the proposed implementation of the Preferred Alternative does not have the potential to cause affects to historic resources, therefore no further coordination

¹²⁷ New South Associates. *Atlanta's Temple of Public Health Centers for Disease Control Cultural Resource Assessment DeKalb and Gwinnett Counties, Georgia*. August 28, 2009. p. 203.

under Section 106 of the NHPA is anticipated. Background information pertaining to prior cultural resource surveys on the Roybal Campus and the proposed implementation of the Master Plan was submitted to the GDNR Historic Preservation Division in April 2013. In their correspondence of June 20, 2013, HDP indicated that the proposed undertaking does not have the potential to result in historic resource impacts and concurred with the HHS/CDC that no further coordination under Section 106 of the NHPA is required.¹²⁸ As a result, the Preferred Alternative would not result in significant adverse impacts to cultural resources within the Study Area or beyond.

¹²⁸ Phone correspondence with Elizabeth Shirk, Environmental Review Coordinator, GDNR, Historic Preservation Division, June 20, 2013.

3.8 Urban Design & Visual Resources

3.8.1 Affected Environment

Urban design characteristics of an area often refer to building bulk, arrangement of buildings, street patterns, streetscape elements, and natural features. Visual resources usually include public spaces or natural and built features such as water features, public parks, landmarks, or natural resources. The combination of architectural design and visual resources produce a unique visual character that defines the area.

The Roybal Campus is located in DeKalb County, just outside the limits of the City of Atlanta, within an area commonly referred to as Druid Hills. The urban design of the Study Area is influenced by a number of factors such as suburban development, concentration of institutional landholders, historic designation of neighborhoods and topography.

The urban design characteristics of the Study Area have been shaped by the suburban development pattern, which was initially influenced by the streetcar and then the automobile. The Study Area exhibits primarily a curvilinear street pattern, a distinct separation of land uses and lower to moderate - density development. Residences are the predominant land use in the Study Area. As discussed in Section 3.2.1 Land Use, residential uses comprise approximately 52 percent of the total Study Area. Several historic neighborhoods and districts are located within the Study Area including Druid Hills, University Park, Emory Estates, and Emory Highlands. A detailed discussion of historic resources within the Study Area is provided in Section 3.7. Cultural Resources. These neighborhoods are typically composed of single-family residences on medium to large lots. The Druid Hills neighborhood was designed by Fredrick Law Olmstead, Sr. and represents one of Atlanta's first major suburban communities. Construction of the 1,500 acre Druid Hills planned community, located south of the Roybal Campus, began in 1905 and continued through the 1920's.¹²⁹ The community which is now designated as the Druid Hills Historic District is characterized by a curvilinear road pattern, numerous open spaces and single-family homes on medium to large lots. According the Olmstead's initial design, the area has maintained its tree cover and planted street trees. The Druid Hills neighborhood and adjacent neighborhoods exhibits a range of architectural styles including Tudor Revival, Elizabethan Revival, Craftsman bungalows and Colonial Revival cottages.¹³⁰ Many of the residences possess a brick façade embellished with stone facings.¹³¹

Commercial uses within the Study Area are limited and primarily concentrated along the major arterials and major intersections within the Study Area including Briarcliff Road, Clifton Road, Clairmont Road and North Decatur Road. The strip shopping plaza is the ubiquitous commercial building form found within the Study Area. The shopping plazas are characterized by 1-story rows of connected units with plain façade and associated street-fronting parking. Emory Village is a notable historic commercial core located at the corner of North Decatur and Oxford Road. A new roundabout at the corner of Oxford Road and North Decatur Road serves as the focal centerpiece of Emory Village. The area consists of a mix of one-story commercial buildings with varying architectural styles. Some of the buildings exhibit

¹²⁹ Alliance to Improve Emory Village. *Emory Village Revitalization Plan*. Prepared by Peter Drey and Company.p. A3-3.

¹³⁰ Ibid., p. A3-4.

¹³¹ Ibid., p. A3-4

elaborate architectural features including terra cotta and cast stone decorative elements.¹³² Emory Point is a notable new commercial area located directly north of the Roybal Campus. Emory Point is a mixed-use development consisting of multi-story residential buildings with lower level retail space. This development represents the first mixed-use development constructed within DeKalb County's new Pedestrian Community Subdivision 3 zoning designation.¹³³

The Study Area contains a high concentration of institutional uses which influence the architectural style and scale of the area, including the HHS/CDC, Emory University, VA Medical Center, Emory Healthcare, Children's Healthcare at Egleston, Wesley Woods Center, and Marcus Autism Center. The bulk and density of buildings within institutionally owned land is dramatically different than the surrounding residential neighborhoods. The larger scale buildings and greater density of the institutional uses is particularly notable on Clifton Road, from North Decatur Road to Briarcliff Road. Emory University is the largest land holder within the Study Area and has the greatest influence on the character of the surrounding area. The campus consists of a mix of architectural styles reflective of the varied phases of campus construction. The buildings constructed pre-WWII, represent a more formal and cohesive collegiate architectural form and organization. The original 13 campus buildings were designed by Henry Hornbostel and represent a combination of Beaux Arts classicism and Mediterranean Revival style.¹³⁴ These original buildings exhibit a block form shape with Georgia marble façade and red terra cotta tile roofs. Most of the pre-war buildings follow a similar architecture style.¹³⁵ Buildings constructed post WWII represent a more modern architectural form. Newer buildings generally exhibit more cohesive building elements including natural stone or stucco façade, red tile roofs and brick walkways.¹³⁶

Although portions of the Emory University campus are densely developed, the campus is also defined by its natural aesthetic which includes preserved forestland, naturalized landscape areas and formal landscaped area such as lawns.¹³⁷ Approximately 338 acres of the Emory University campus are classified as preserved or restricted lands.¹³⁸ These areas are restricted from development in order to preserve the natural ecological setting of the campus.¹³⁹ Emory University also has a policy of no net loss of tree canopy in order to maintain their existing tree cover. As such an extensive land use holder, the preservation of natural areas within the Emory University campus greatly contributes to the prevalence of extensive forest canopy found in the Study Area.

The Roybal Campus is located within this concentration of large scale institutional buildings and greater building densities. The campus is physically separated from adjacent Emory University property by Clifton Road to the north, Houston Mill Road to the east and the CSX rail line to the south. The campus is also visually set apart from the adjacent uses by the presence of an ornamental fence which surrounds the north and west edges of campus and a chain link security fence that surrounds the remaining portions of the campus. Security dictates the need for this physical and visual separation.

¹³² Ibid., p. A3-13

¹³³ Clifton Community Partnership (CCP). Clifton Corridor Urban Design Guidelines. December 2008. Prepared by Goody Clancy. p.xxv

¹³⁴ Ibid., p. A3-4

¹³⁵ Emory University Master Plan Update 2005. P.7.

¹³⁶ Ibid., p. 10

¹³⁷ Emory University. 2012 Campus Design Guidelines Draft. P.27.

¹³⁸ Ibid, p. 11.

¹³⁹ Ibid, p. 11.

The Roybal Campus consists of 19 existing buildings and support structures totaling approximately 3.8 million gsf on 46.7 acres of land. Campus buildings are organized by functional zones. Laboratory uses serve as the core of the campus, flanked by office uses. The research and office buildings within this zone exhibit the greatest building mass and heights. Parking, utilities and supporting facilities are located around the perimeter. This organization of uses by functional zones, result in the concentration of large-scale buildings within the center of the campus and the smaller-scale support facilities located around the perimeter of the campus.

The Roybal Campus has undergone extensive transformation in the last 12 years. The majority of buildings on campus are less than 10 years old and exhibit a modern construction aesthetic. The existing architecture of the Roybal Campus is dominated by curved glass buildings, modern architecture, and contemporary landscaping. Materials used in the new buildings include earth-tone brick, stone, metal panels, and aluminum curtain walls. Punched windows are also integrated into stone and brick facades. Some of the buildings include sunshades at southern exposed windows. Curved metal roofs are a prevalent feature, as are articulated facades that express the structural system grid and stairs expressed as exterior form.

Although the campus has grown rapidly over the last decade, the organization, orientation and relationship of each building to one another has been carefully planned. The campus has been incrementally designed to facilitate the internal movement of pedestrians and vehicular traffic from east to west, and respond to the surrounding spatial character. The provision of high quality and abundant open space has also been an integral part of the campus vision and promotes a dense, walkable environment.

Landscape features enhances the visual character of the campus. The western portion of campus contains the largest continuous portion, consisting of informal lawn areas with meandering walkways and a cascading creek. The creek, which is reminiscent of a natural stream, includes intermittent fountains integrated with pedestrian walkways and gathering areas, which then eventually empties into a stormwater detention pond. Formalized walkways and a linear plaza space surround the cascading creek providing pedestrian access closer to the buildings. Informal vegetation open spaces and corresponding informal pedestrian walkways are located in the northeastern corner of the campus and continuing along the Clifton Road boundary, which also includes enhanced streetscape improvements.

3.8.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, no new construction, major renovations adding a significant new population or infrastructure improvements would occur on campus. There would be no physical changes to the Roybal Campus. Impacts to urban design and visual resources are not anticipated. Based on development trends discussed in Section 3.2, the Study Area is likely to experience additional moderate densification of institutional uses and potential redevelopment of underutilized commercial areas. Existing zoning regulations, as well as existing design guidelines such as the CCP's *Clifton Corridor Design Guidelines* (2008), Emory University's 2012 Campus Design Guidelines and Emory University's *Campus Master Plan 2005 Update*, the *DeKalb County Comprehensive Plan 2005-2025*, and LIC studies would guide future development within the Study Area.

Preferred Alternative

The Preferred Alternative would introduce new structures on campus and would alter the visual landscape of the campus. The new structures would be sited in the eastern portion of the campus on existing surface parking lots. The buildings would be sited according to the existing functional zone layout. The new laboratory would be located adjacent to existing research facilities within the core of the campus and the parking deck would be sited at the southeastern perimeter of the campus. Elevated walkways would connect the new parking deck to the new laboratory building and adjacent laboratory buildings. The elevated walkways would introduce a new visual element to the campus. The addition of the new laboratory and parking deck would result in increased density of the Roybal Campus. The height of the new laboratory would be consistent with the heights of other campus buildings within the core of the campus. The new laboratory would not be higher than any existing building on campus. The buildings would be designed to preserve the existing design vernacular.

The Roybal Campus would maintain the existing percentage of open space, as the new structures would be built on existing paved surfaces. New landscape would be created in the eastern portion of the campus to provide pedestrian gathering areas and linkages to the west campus. The proposed landscape plan would include formal open space plazas, as well as informal open space and passive lawn areas. The existing landscaping along the perimeter of the campus would be maintained. A coordinated approach to landscape development would contribute to a consistent and positive visual image on the campus.

The new structures would increase the density of buildings on the campus and would result in a change in visual views from the surrounding streets. The new laboratory building would be the most prominently visible from the east approach on Clifton Road as well as from Houston Mill Road. The new parking deck would be most prominently visible from Houston Mill Road. Although the new structures would be visible from the adjacent streets and adjacent land uses, the development is not significantly different from existing height and massing of buildings on the Roybal Campus or the density and scale of development along the Clifton Road. Significant adverse impacts to urban design and visual resources are not anticipated.

3.9 Natural Resources

3.9.1 Affected Environment

Natural resources include geology and soils, water resources, water quality, vegetation, floodplains, wildlife and protected species. This section provides an inventory of the existing natural resources present on the Roybal Campus and within the vicinity of the Study Area. The potential for the Preferred Alternative to significantly impact natural resources is also evaluated below.

As part of this evaluation, existing reports, literature, and information from federal and state agencies were reviewed to describe the existing natural resource conditions within the Roybal Campus and Study Area. The suitability of the Roybal Campus for wildlife habitat was also assessed during field investigations. Information regarding rare, threatened or endangered species and critical habitat in the vicinity of the Roybal Campus was requested from the Georgia Department of Natural Resources, United States Fish and Wildlife Service. Information on the location of the 100 - and 500-year floodplains was obtained using Federal Emergency Management Agency Flood Insurance Rate Maps. National Wetland Inventory Maps were reviewed and did not identify and areas that could potentially be classified as wetlands on the Roybal Campus.

Geology and Soils

The Roybal Campus, and the Study Area, is located in the Piedmont Plain Physiographic Province. The Piedmont Province is north of the fall line, and is composed of igneous and metamorphic rock overlain by saprolitic and residual soil formed by the in-place weathering of bedrock.¹⁴⁰ According to the 1976 Geologic Map of Georgia, the unit name is Biotitic Gneiss/Mica Schist/Amphibolite (map symbol fg3).¹⁴¹ The unit is located in the Blue Ridge and Piedmont Province, and the unit age is Precambrian-Paleozoic.

According to the United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS), four dominant soil types were identified within the Roybal Campus. Approximately 41.4 percent of the campus consists of Urban Land, 40.2 percent consists of Pacolet-Urban Land, 17.5 percent is Cecil-Urban Land, and 0.9 percent is classified as Madison soils (Refer to Table 3.9-1).

A total of 14 soil types have been identified by the USDA NRCS within the Study Area. Please refer to Table 3.9-2 below for a brief description of each soil type and refer to Figure 3.9-1: Soils for a depiction of the soil series occurring within the Study Area.

¹⁴⁰ New Georgia Encyclopedia, <http://www.georgiaencyclopedia.org/nge/Article.jsp?id=h-2126>, (March 2013)

¹⁴¹ Lawton, D.E., et al. *Geologic Map of Georgia*. Georgia Geological Survey. 1976

Table 3.9-1: Summary of Soil Series within the Roybal Campus

Soil Series	Slope Range	Erodibility (Low, Med, High)	Use	Soil Characteristics
Cecil	0-25%	medium-high	woodland, cropland, and pasture	Well drained and moderately permeable. Runoff rate is medium to rapid. Often located on ridges and side slopes.
Madison	2-60%	low-high	woodland, cropland, hayland, and pasture	Well drained and moderately permeable. Runoff rate is medium to rapid. Occurs on gently sloping to steep uplands.
Pacolet	2-60%	medium-high	woodland, grain, hayland, and pasture	Well drained and moderately permeable. Runoff rate is medium to rapid. Located on gently sloping to very steep uplands.
Urban Land	Varied	Varied	not prime farmland	Filled with crushed rock or other material resistant to weathering. Runoff rates and slopes are varied.

Figure 3.9-1: Soils

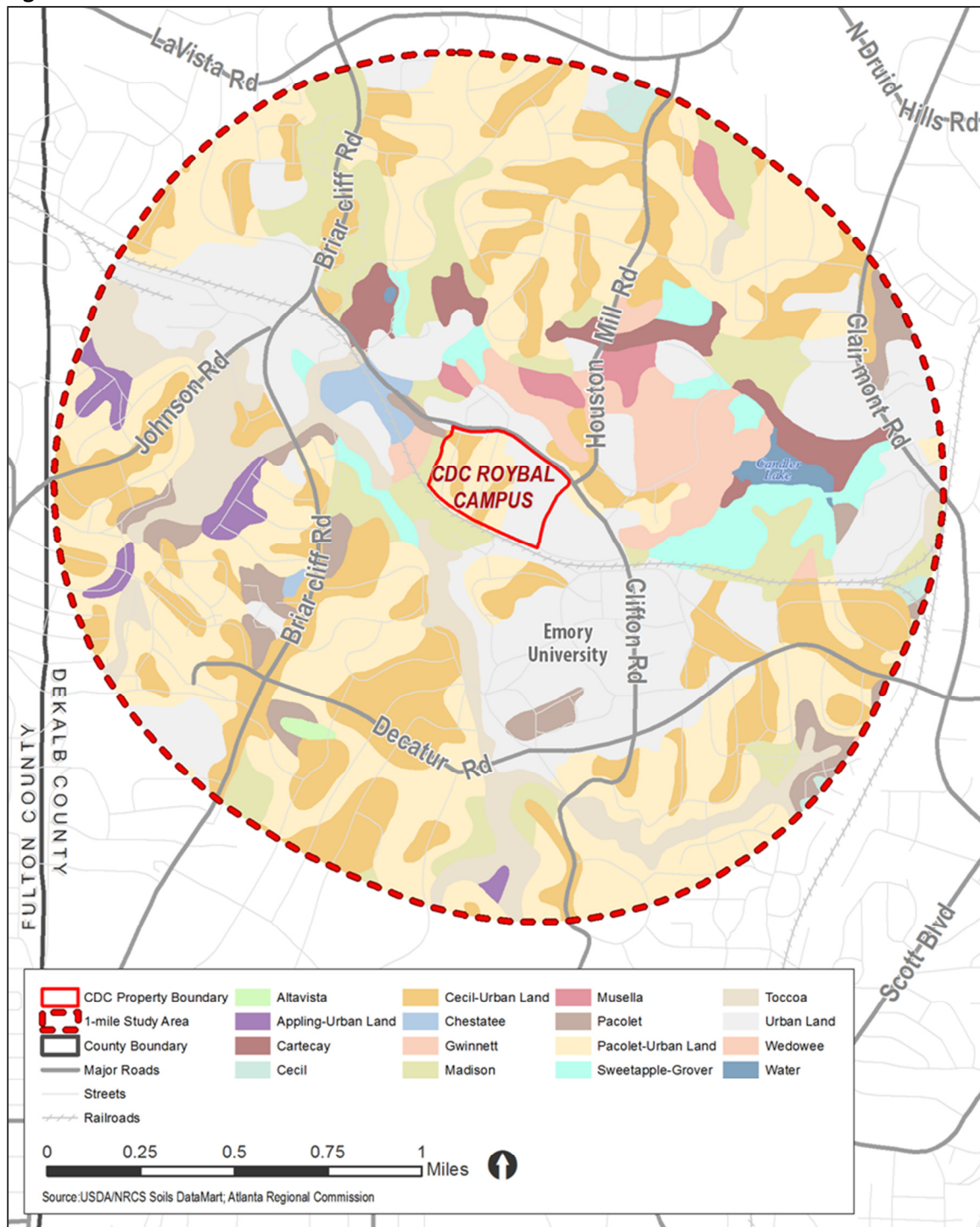


Table 3.9-2: Summary of Soil Series within the Study Area

Soil Series	Slope Range	Erodibility (Low, Med, High)	Use	Soil Characteristics
Altavista	0-10%	low-medium	cropland and woodland	Moderately well drained and moderately permeable. Runoff rate is slow. Typically associated with stream terraces.
Appling	0-25%	medium-high	woodland, pasture, and cropland	Well drained and moderately permeable. Runoff rate is medium to rapid. Located on ridges and side slopes.
Cartecay	0-5%	low	cropland, hayland, and pasture	Somewhat poorly drained and moderately to rapidly permeable. Runoff rate is slow. Often found in floodplains.
Cecil	0-25%	medium-high	woodland, cropland, and pasture	Well drained and moderately permeable. Runoff rate is medium to rapid. Often located on ridges and side slopes.
Chestatee	10-50%	medium-high	woodland and pasture	Well drained and moderately permeable. Runoff rate is rapid. Located on moderately to steeply sloping areas.
Gwinnett	2-60%	medium-high	woodland, cropland, hayland, and pasture	Well drained and moderately permeable. Runoff rate is medium to rapid. Located on very gently sloping to very steep ridges.
Grover	2-45%	low-high	woodland, cropland, hayland, and pasture	Well drained and moderately permeable. Runoff rate is medium to rapid. Located on ridges and side slopes.
Madison	2-60%	low-high	woodland, cropland, hayland, and pasture	Well drained and moderately permeable. Runoff rate is medium to rapid. Occurs on gently sloping to steep uplands.
Musella	2-80%	medium-high	woodland, cropland and pasture	Well drained and moderately permeable. Runoff rate is rapid. Located on narrow, gently sloping ridgetops and moderate to strong side slopes.
Pacolet	2-60%	medium-high	woodland, grain, hayland, and pasture	Well drained and moderately permeable. Runoff rate is medium to rapid. Located on gently sloping to very steep uplands.
Sweetapple	6-60%	medium-high	woodland	Somewhat excessively drained and moderately to rapidly permeable. Runoff rate is medium to rapid. Located on narrow, gently sloping to sloping ridge tops and strongly sloping to steep hillsides.
Toccoa	0-4%	low	cropland, hayland, and pasture	Well drained and moderately rapid permeable. Runoff rate is very low. Located on floodplains and natural levees.
Urban Land	Varied	Varied	not prime farmland	Filled with crushed rock or other material resistant to weathering. Runoff rates and slopes are varied.
Wedowee	0-60%	low-high	woodland, cropland, hayland, and pasture	Well drained and moderately permeable. Runoff rate is medium to rapid. Located on narrow ridges and side slopes.

Source: Coder, K.D., and T.R. Gerald. *Hydric Soils of Georgia*. The University of Georgia Cooperative Extension Service. Miscellaneous Publication No. 412. Athens, GA, 1990.

Topographic Conditions

Surface elevations in DeKalb County range from 1,683 feet above mean sea level (msl) at the top of Stone Mountain to 640 feet in the Southeastern part of the County. Generally, the county consists of very gentle to gentle slopes on the hilltops and ridgetops, which are typically smooth and convex. Steeper slopes are present along drainage ways.

The Roybal Campus is located on the south slope of an east-west ridge that Clifton Road follows in the vicinity of the HHS/CDC. This ridge broadens to the east, and narrows to the west, ending at the confluence of South Fork Creek and Peavine Creek. To the north of Clifton Road, the ridge declines toward South Fork Creek, dropping in elevation from around 1,000 feet at Clifton Road to approximately 850 feet above mean sea level (msl) at the stream. To the south of Clifton Road, elevations drop from 1,000 feet to approximately 840 feet msl at Peavine Creek. This southerly slope is interrupted by the Seaboard Coast Rail Road, which forms a low, narrow east-west berm just below the south side of the Roybal Campus.

The topography of the Roybal Campus slopes towards the south-southwest. Elevations range between 883 and 997 feet above msl.¹⁴² The lowest point, at approximately 883 feet above msl, is located on the west-southwest portion of the campus. The highest point, located on the west north-west portion of the campus, is approximately 997 feet above msl. Short areas of steep slopes exist around buildings and parking lots.

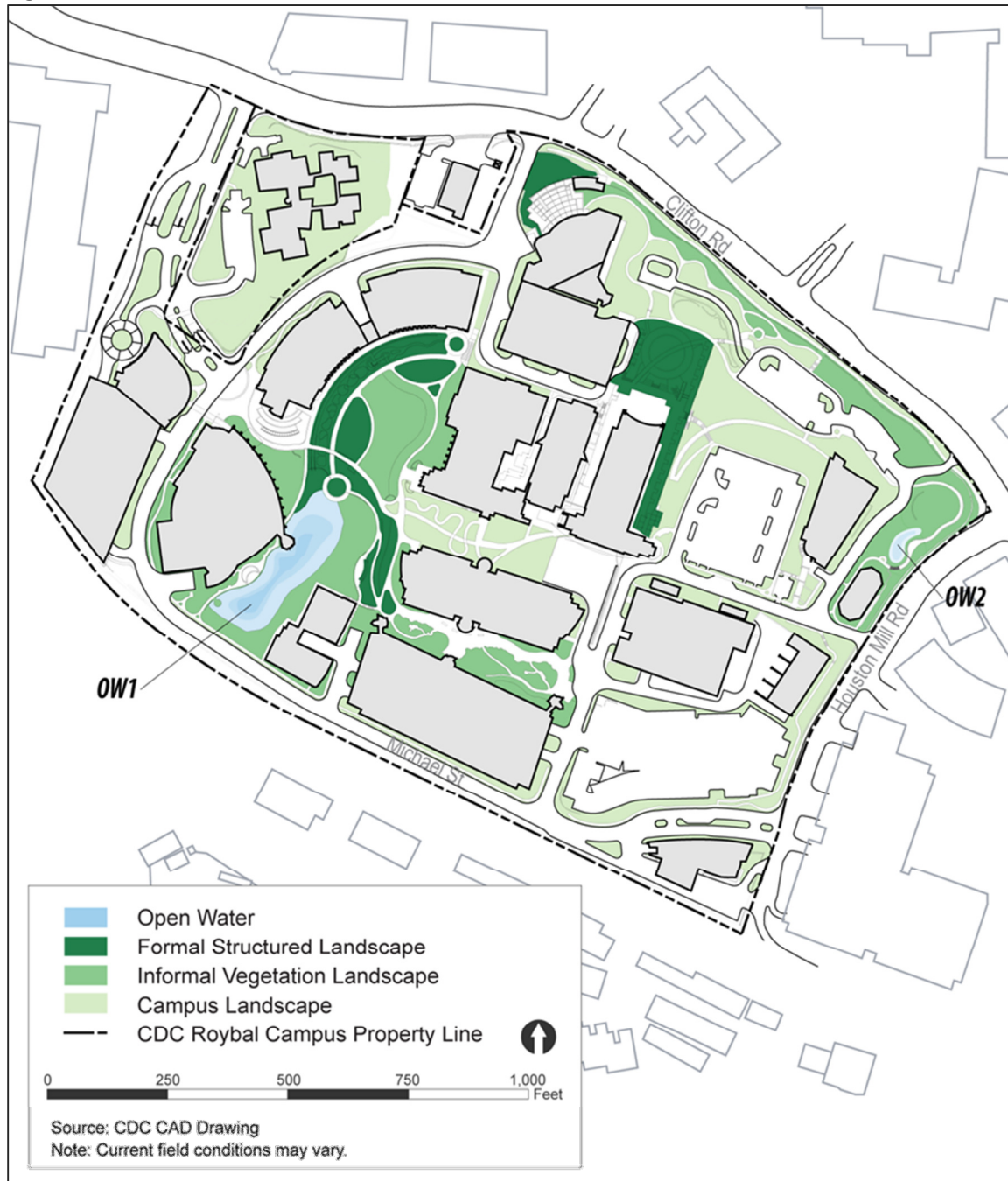
The overall Study Area, consisting of gently rolling hills associated with the Piedmont Uplands, ranges between 775 to 1,204 feet above msl. The lower elevation areas are associated with South Fork Peachtree Creek, Peavine Creek, and Lullwater Creek.

Water Resources and Water Quality

The Roybal Campus contains two (2) surface waterbodies, which are classified as Open Water 1 (OW 1) and Open Water 2 (OW 2). Refer to Figure 3.9-2: Surface Waters. These waterbodies are briefly described below:

OW 1 is an approximately 0.5-acre stormwater detention pond located in the southwest quadrant of the Roybal Campus. Based on historic aerial images, construction of the pond began in early 2002 and was completed in late 2005. The pond functions to provide storm water retention and improve water quality in the area. OW 1 is also used as an ornamental feature and contains a series of artificial waterfalls at the head of the pond. Dominant vegetation along the banks consist of mapleleaf viburnum (*Viburnum acerifolium*), oakleaf hydrangea (*Hydrangea quercifolia*), river birch (*Betula nigra*), black willow (*Salix nigra*), and loblolly pine (*Pinus taeda*). The herbaceous buffer is greater than 50 feet in width in most areas.

¹⁴² Northeast Atlanta, Georgia, United States Geological Survey (USGS) 7.5-minute Topographic Map.

Figure 3.9-2: Surface Waters

OW 2 is an approximately 0.07-acre stormwater detention pond located in the northeast quadrant of the Roybal Campus. Based on historic aerial images, construction of the pond began in early 2007 and was completed by June 2007. The pond functions to detain storm water flowing from the hillside at Clifton Road towards the campus. OW 2 is also used as an ornamental feature with a sidewalk surrounding the pond's edge and a small pedestrian footbridge at the south end. Dominant vegetation along the banks consist of black willow and loblolly pine. The herbaceous buffer is greater than 25 feet in width in most areas.

All surface runoff from the existing Roybal Campus drains to Peavine Creek, which is located approximately 500 to 1,200 feet south of the southern boundary of the Roybal Campus. Peavine Creek discharges to the South Fork of Peachtree Creek, approximately 200 feet west of the campus. The South Fork of Peachtree Creek empties into Peachtree Creek, which discharges to Nancy Creek. This segment of Nancy Creek is in close proximity to Nancy Creek's confluence with the Chattahoochee River.

Every waterbody in the State of Georgia has one or more designated uses, including, but not limited to "fishing", "recreation" and "drinking water". The state of Georgia has adopted water quality criteria and parameters to protect these uses. Section 305 (b) of the Clean Water Act (CWA) requires States to assess and describe the quality of its waters and Section 303 (d) of the CWA requires States to submit a list of all waters that are not meeting there designated uses . These reports are submitted every two years in a combined report 305(b)/303(d).¹⁴³ According to Georgia's 2010 Integrated 305(b)/303(d) list of impaired waters, the Roybal Campus is located within one linear mile upstream of and within the same watershed as a stream classified by the EPA as a "non-supporting" biota impaired stream.¹⁴⁴ Within the 1-mile Study Area, Peavine Creek and Lullwater Creek are listed under Category 4a for a fecal coliform bacteria violation. South Fork Peachtree Creek, also within the Study Area, is listed for fecal coliform bacteria, biota impacted fish community, and biota impacted macro invertebrate community. Urban runoff/urban effects are listed as the potential source for violations on these waterways.

A review of National Wetland Inventory (NWI) Maps identified no wetlands on the Roybal Campus. A subsequent field investigation, conducted on April 4, 2013, concluded that OW 1 and OW 2, as described above, are not state or federally regulated wetlands, as they were constructed for the purpose of stormwater detention and to improve stormwater quality. Based on the NWI Maps, six (6) streams, nine (9) wetlands, and three (3) open waters were identified within the 1-mile Study Area. Refer to Figure 3.9-3: Wetlands. Wetland types were classified as palustrine forested palustrine scrub-shrub, and palustrine emergent.¹⁴⁵

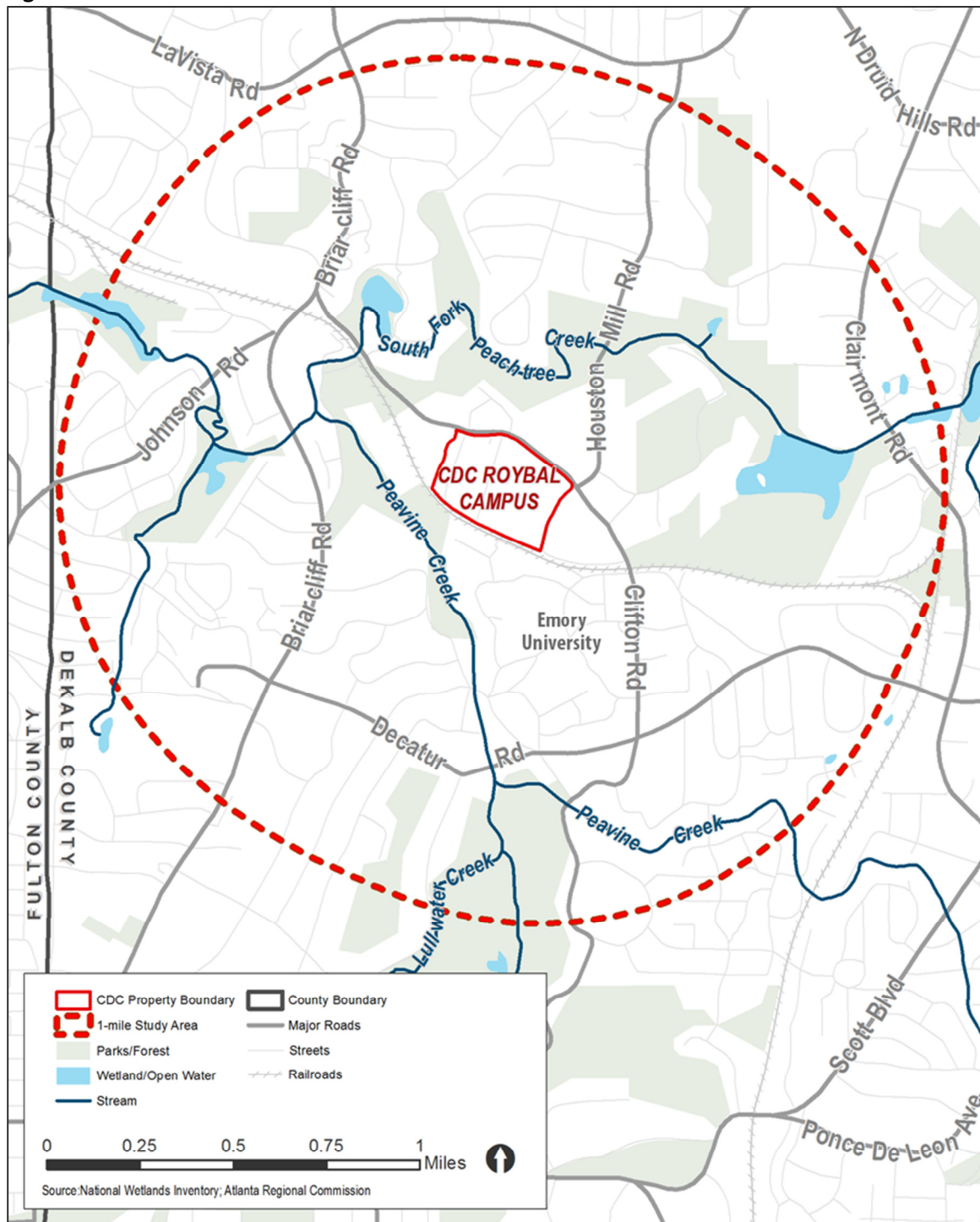
Stormwater generated on the Roybal Campus flows through a network of underground drainage pipes that direct the stormwater to four (4) off-site outfalls located south of Michael Street. The four (4) outfalls discharge the site generated stormwater to Peavine Creek, which is located approximately 500-1,200 feet south of the Roybal Campus.

¹⁴³ Description of the 305(b)/303(d) List of Waters, http://www.georgiaepd.org/Files_PDF/305b/Y2012_303d/Description_of_305b_303d_List_Y2012.pdf (May 29, 2013)

¹⁴⁴ Georgia Environmental Protection Division. *Draft Georgia 2012 Integrated 305(b)/303(d) List* http://www.gaepd.org/Files_PDF/305b/Y2012_303d/Y2012_Streams.pdf (March 8, 2013)

¹⁴⁵ U.S. Fish and Wildlife Service. *National Wetlands Inventory*. <http://107.20.228.18/wetlands/index.html> (March 4, 2013)

Figure 3.9-3: Wetlands



Vegetation

The Roybal Campus is entirely developed with no natural vegetation remaining. The existing vegetation on the Roybal Campus consists of formal and informal landscaped areas. The western portion of the Roybal Campus contains the largest continuous portion of open space where a creek runs into a detention basin, a population of mature oak trees is present, and formalized walkways and plazas provide pedestrian access within the campus. The buffer along the east side of the campus is mainly informal in character with mature trees and natural drainage swales. The north side of the campus is a more formalized streetscape with sidewalks and fencing. For the most part, the campus is entirely developed with little natural vegetation remaining. Ground cover is primarily grass, with small areas on slopes and around buildings planted in low shrubs and plantings.

A field investigation was conducted on April 4, 2013 in order to characterize the vegetation communities within and adjacent to the Roybal Campus for an analysis of impacts to state-and federally protected flora and fauna species and their habitats, as well as other communities and habitats. The vegetation community identified on the Roybal Campus is classified as ruderal. Ruderal communities are characterized as anthropogenic habitats, including residential and commercial areas, roads, and maintained rights-of-way (ROWs). They are characterized by a lack of vegetation or presence of non-native vegetation. These communities provide minimal habitat for wildlife diversity. Areas of high-quality, native vegetation were not identified on the Roybal Campus.

Invasive species, consisting of Chinese privet (*Ligustrum sinense*), Japanese honeysuckle (*Lonicera japonica*), and kudzu (*Pueraria montana*) were identified on campus.¹⁴⁶ These species were primarily located south of OW 1, along the southern property line of the Roybal Campus. Refer to Table 3.9-3 for more information on the invasive species identified within the Roybal Campus.

Table 3.9-3: Invasive Plant Species within the Roybal Campus

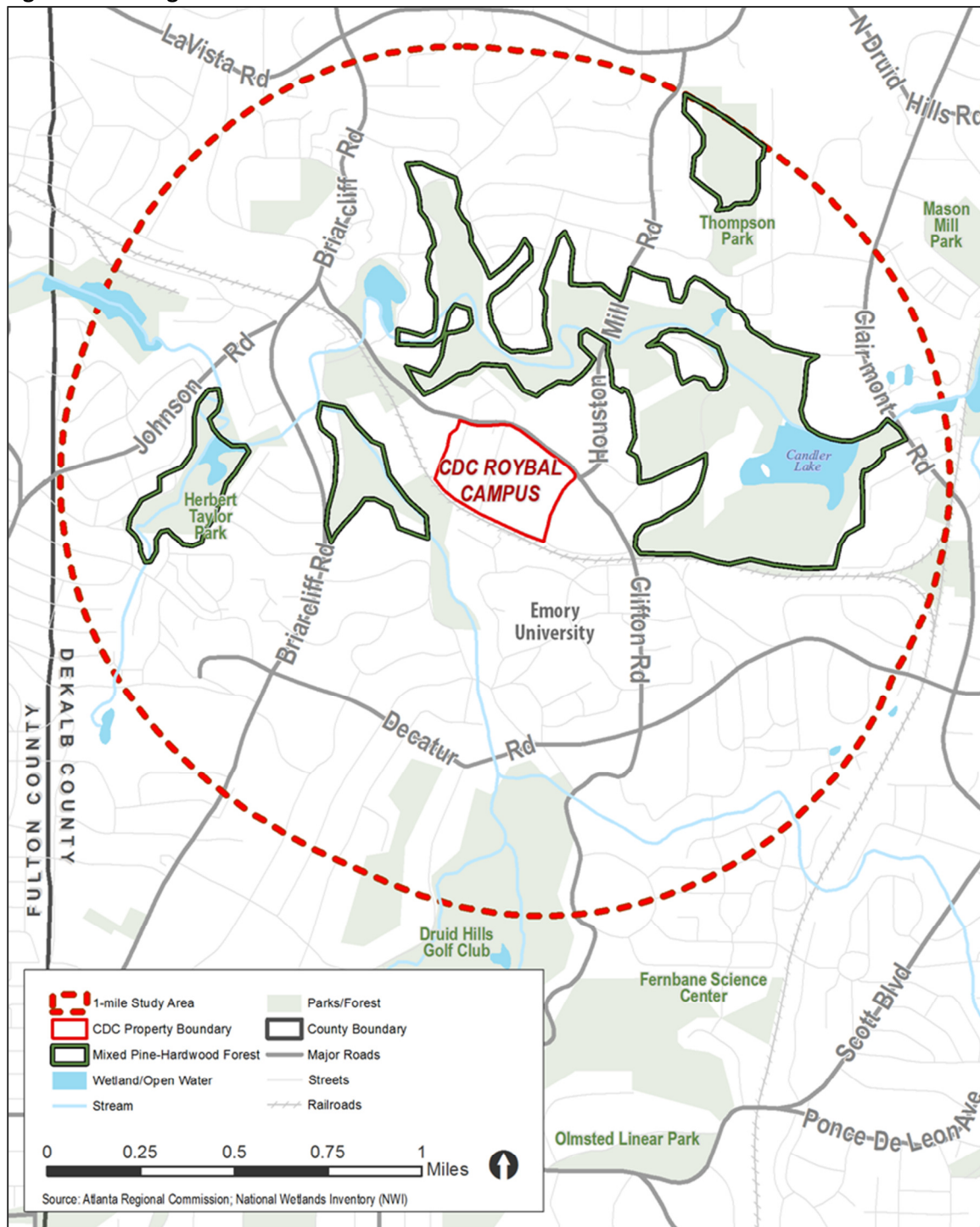
Scientific Name	Common Name	Habitat
<i>Ligustrum sinense</i>	Chinese privet	bottomland forests, fencerows, fields, and right-of-way
<i>Lonicera japonica</i>	Japanese honeysuckle	woodlands, roadsides, fencerows, and pastures
<i>Pueraria montana</i>	kudzu	right-of-way and streambanks

Vegetation communities of potential occurrence within the Study Area are primarily classified as ruderal, resulting from the suburban/urban environment adjoining the Roybal Campus. The second most prominent vegetation community is Mixed Pine-Hardwood. Refer to Figure 3.9-4: Vegetation. A description of the predominant Study Area vegetation communities is provided below.

Ruderal. As discussed above, ruderal communities are characterized as anthropogenic habitats including residential areas, commercial areas, industrial areas, roads, and maintained ROWs. These communities provide minimal habitat for wildlife diversity, and were identified throughout the upland areas of the Study Area. Several different types of ruderal habitats exist within the Study Area including institutional property, residential property, commercial property, industrial property, road ROW, and

¹⁴⁶ U.S. Department of Agriculture. *National List of Scientific Plant Names, Volume 2 Synonymy*. Soil Conservation Service. 1982. SCS-TP-159.

Figure 3.9-4: Vegetation



utility ROW. Typical dominant vegetation in these areas includes ornamental trees such as red maple (*Acer rubrum*), crape myrtle (*Lagerstroemia* spp.), and southern magnolia (*Magnolia grandiflora*); shrub species such as Chinese privet and smooth sumac (*Rhus glabra*); and herbaceous species such as fescue grass (*Festuca* spp.), horseweed (*Conyza canadensis*), blackberry species (*Rubus* spp.), broomsedge (*Andropogon virginicus*), goldenrod (*Solidago canadensis*), and dog fennel (*Eupatorium capillifolium*).^{147,148,149} These areas are regularly maintained by a vegetation maintenance regime such as mowing.

Mixed Pine-Hardwood. A mixed-pine hardwood forest (MPH) is the dominant forest type within the Study Area. Typical dominant vegetation in these areas includes overstory tree species such as loblolly pine, oak species (*Quercus* spp.), hickory species (*Carya* spp.), tulip poplar (*Liriodendron tulipifera*), and sweetgum (*Liquidambar styraciflua*); midstory species such as eastern hophornbeam (*Ostrya virginiana*) and flowering dogwood (*Cornus florida*); shrub species such as Chinese privet and autumn olive; vine species such as Virginia creeper (*Parthenocissus quinquefolia*), greenbrier species (*Smilax* spp.), Japanese honeysuckle, and crossvine (*Bignonia capreolata*); and herbaceous species such as poison ivy (*Toxicodendron radicans*), Christmas fern (*Polystichum acrostichoides*), and fescue species.^{150,151} This community type provides a good wildlife habitat.

Additional communities, which are more limited in their presence within Study Area, consist of palustrine forested wetland (PFO), palustrine scrub-shrub wetland (PSS), palustrine emergent wetland (PEM), or a combination of multiple wetland system types (e.g. PEM/PSS).¹⁵²

Floodplains

Executive Order (EO) 11988 (Floodplain Management) requires federal agencies to avoid direct or indirect support of development within the 100-year floodplain whenever there is a practicable alternative. A floodplain is defined as the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, and including, at a minimum, the area subject to a 1 percent or greater chance of flooding in any given year. Flood zones are land areas identified by the Federal Emergency Management Agency (FEMA) that describe the land area in terms of its risk of flooding. A Flood Insurance Rate Map (FIRM) is a map created by the National Flood Insurance Program (NFIP) for floodplain management and insurance purposes.

According to the FEMA FIRM, the Roybal Campus is not located within the 100- or 500-year floodplain. The Study Area has areas located in both the 100- and 500-year floodplain, which are associated with

¹⁴⁷ Brown, Claud L. and L. Katherine Kirkman. *Trees of Georgia and Adjacent States*. Timber Press, Portland, OR, 1990.

¹⁴⁸ U.S. Department of Agriculture. *National List of Scientific Plant Names, Volume 2 Synonymy*. Soil Conservation Service. 1982. SCS-TP-159.

¹⁴⁹ Petrides, George A. *A Field Guide to Trees and Shrubs*. Peterson Field Guide Series. Houghton Mifflin Company, New York, NY, 1972.

¹⁵⁰ U.S. Department of Agriculture. *National List of Scientific Plant Names, Volume 2 Synonymy*. Soil Conservation Service. 1982. SCS-TP-159.

¹⁵¹ Petrides, George A. *A Field Guide to Trees and Shrubs*. Peterson Field Guide Series. Houghton Mifflin Company, New York, NY, 1972.

¹⁵² Cowardin, L.M., Virginia Carter, F.C. Golet, and E.T. LaRoe. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Department of the Interior, Fish and Wildlife Service. Washington, DC, FWS/OBS-79/31, 1992.

South Fork Peachtree Creek, Clairmont Lake, Rock Creek, Candler Lake, Lullwater Creek, and Peavine Creek.

Wildlife and Protected Species

There are no natural wildlife habitats on the Roybal Campus. Very few wildlife species were observed during the April 4, 2013 field survey. Two waterfowl species, a pair of mallards (*Anas platyrhynchos*), and a Canada goose (*Branta canadensis*) were observed near OW 1. Although not directly observed, it is assumed based on the habitat conditions that other species common to developed areas, such as eastern grey squirrel (*Sciurus carolinensis*), raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), eastern cottontail (*Sylvilagus floridanus*), and a variety of other small rodents and birds may utilize the area.¹⁵³

The Migratory Bird Treaty Act (MBTA) and the Executive Order (EO) on the Responsibility of Federal Agencies to Protect Migratory Birds (EO 13186) requires the protection of migratory birds and their habitats¹⁵⁴. The Roybal Campus was surveyed for the presence of migratory bird habitats and migratory birds. Suitable forested areas are not present on the Roybal Campus and migratory birds were not observed.

Several common wildlife species that would potentially occur within the Study Area consist of the white-tailed deer (*Odocoileus virginianus*), eastern grey squirrel, raccoon, Virginia opossum, eastern coyote (*Canis latrans*), eastern cottontail, and a variety of other small rodents and birds. These species are all year-round residents and may be found during all seasons.

Under terms of Section 7 of the Endangered Species Act of 1973, federal agencies shall “ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary to be critical, unless an exception has been granted by the Endangered Species Committee”.¹⁵⁵

The tentative list of known protected species was compiled upon review of the US Fish and Wildlife Service (USFWS) Information, Planning, and Conservation System (IPaC) (updated February 2013) and the Georgia Department of Natural Resources – Nongame Conservation Section (GDNR-NCS) website^{156,157}. In-house database searches indicated that three federally listed species, one federal candidate species, and 11 state-listed species are known to occur within DeKalb County, Georgia.

An early coordination letter was sent to the GDNR-NCS on February 27, 2013 requesting information on known occurrences of protected flora and fauna species within a 3-mile radius of the Roybal Campus. On April 10, 2013, GDNR noted that a known occurrence of bay star-vine (*Schisandra glabra*) and a

¹⁵³ Burt, W.H., and R.P. Grossenheider. *A Field Guide to the Mammals of North America North of Mexico*. Peterson Field Guide Services. Houghton Muffin Company, New York, NY, 1980.

¹⁵⁴ Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat. 755), as amended.

¹⁵⁵ Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended

¹⁵⁶ Georgia Department of Natural Resources. *Known Occurrences of Special Concern Plants, Animals, and Natural Communities; DeKalb County*.

http://georgiawildlife.com/sites/default/files/uploads/wildlife/nongame/text/html/cnty_eos/dekalb.html (March 4, 2013)

¹⁵⁷ U.S. Fish and Wildlife Service. *Information, Planning, and Conservation System (IPAC) Natural Resources of Concern, DeKalb County, Georgia*. <http://ecos.fws.gov/ipac/wizard/trustResourceList!prepare.action>, (March 4, 2013)

historic occurrence of the Chattahoochee crayfish (*Cambarus howardi*) have been recorded within three miles of the Roybal Campus. A follow-up field investigation of the Roybal Campus concluded that no suitable habitat was identified for any of the referenced state- or federally protected species within the Roybal Campus and no individuals or populations of protected species were identified. Additionally, according to the USFWS Critical Habitat Mapper, the project vicinity does not contain a critical habitat.¹⁵⁸ Refer to Appendix F for the agency coordination letter and a list of state- and federally protected species known to occur in DeKalb County.

Based upon coordination with GDNR-NCS, on-site field investigations and information obtained from the USFWS Critical Habitat Mapper, it can be concluded that protected species are not located within the vicinity of the Roybal Campus.

3.9.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there would be no clearing, grading or construction activities occurring on the Roybal Campus. With the exception of 865 additional on-campus employees, conditions on the Roybal Campus would not change. As such, the No Action Alternative would not result in impacts to geology, soils, topography, surface waters or wetlands within on-campus or within the Study Area. Stormwater would continue to be treated and disposed of in the same manner as the current condition. No aquatic or vegetated areas would be impacted and consequently no habitat suitable for wildlife or protected species would be disturbed. Existing routine maintenance activities, such as mowing and herbicide applications, would not change under the No Action Alternative. Floodplains would not be impacted and coordination with FEMA would not be required.

Preferred Alternative

The Preferred Alternative would involve the construction of a new laboratory building, parking deck, building renovation and infrastructure improvements in currently disturbed areas. The Preferred Alternative would result in the demolition of two existing paved parking areas and the construction of a laboratory building and parking deck within their general footprints. A description of the potential impacts resulting from the Preferred Alternative to natural resources is detailed below.

Geology and Soils

Under the Preferred Alternative, all construction activity would occur on previously disturbed areas that are classified as urban soils, having no value as “prime farmland”. The new laboratory and parking deck would be constructed in areas containing paved at-grade parking lots. The existing pavement would be removed and clearing and grading activities would occur, resulting in the disturbance of surface soils. Construction of the laboratory would require the excavation of approximately 27,000 cubic yards of rock and soil to be hauled off-site, to accommodate below-grade space. However, since these areas were previously disturbed and significantly graded for the existing surface parking lots, are not valued for

¹⁵⁸ US Fish and Wildlife Service. *Critical Habitat Portal*. <http://criticalhabitat.fws.gov/crithab/>(March, 2013)

horticultural use, soil disturbance and compaction would not result in significant impacts to existing soil conditions on-site.

There are no unusual or sensitive geological formations or features on the existing Roybal Campus and the proposed excavation area would only result in limited contact with bedrock, therefore significant adverse impacts to existing geologic conditions are not anticipated.

Soil and slope stabilization measures would be used to further reduce soil movement and potential erosion during construction. Construction equipment would be confined to areas away from slopes to the greatest extent possible. An erosion and sedimentation control plan would also be implemented to control and reduce sediments from entering storm drains and/or adjacent areas during construction. Any grading activities would follow this plan to ensure soil stability and minimize impacts. The Preferred Alternative would not result in significant adverse impacts to geology and soils.

Topographic Conditions

The proposed construction site is currently developed and consists of paved parking lots, paved walkways, and existing buildings. Within the construction limits for both the laboratory building and parking deck, clearing and grading activities would occur. Minor ground disturbance would occur for infrastructure improvements, such as extension of on-campus utilities. However, because these areas were previously graded to accommodate existing site facilities and there are no unique landforms or topographic features, significant topographic alterations would not occur. The proposed office building renovations would not result in any changes to site topography. The Preferred Alternative would not result in significant adverse impacts to topographic conditions.

Water Resources and Water Quality

The proposed construction areas are not within close proximity to regulated surface waters or wetlands. The addition of 1,485 on-campus employees, as well as interior renovations to existing buildings, would have no impacts on surface waters or wetlands. As such, the proposed Master Plan improvements would not result in impacts to surface waters or wetland on campus or within the Study Area.

Since all structural improvements would occur in areas currently containing impervious surfaces, there would be no increase in the amount of stormwater runoff generated on campus by the Preferred Alternative. The two existing open water ponds would continue to improve water quality and manage storm water runoff generated on campus. Additionally, to comply with new water quality standards, Best Management Practices (BMPs) would be implemented to improve the quality of stormwater discharges generated by the Roybal Campus. These measures would involve the use of underground proprietary water quality devices to settle out pollutants. With the use of these water quality devices, the quality of stormwater discharges would improve. As with the current condition, after treatment, site generated stormwater would continue to drain south towards Peavine Creek, as permitted under NPDES.

Prior to the commencement of construction, the proposed improvements would require a National Pollutant Discharge Elimination System (NPDES) General Permit for Construction under Section 402 of the CWA, and an Erosion, Sedimentation, and Pollution Control plan as required by the Georgia Erosion and Sedimentation Control Act of 1975. The NPDES permit would prohibit discharges of point-source

pollutants into Waters of the US. The term “pollutant” is defined by the EPA as any type of waste discharged into Waters of the US.

With the implementation of BMP’s to improve water quality discharges, the Preferred Alternative would not result in significant adverse impacts to water resources and water quality.

Vegetation

All construction proposed under the Preferred Alternative would occur in previously disturbed and developed areas. No areas of high quality vegetation would be impacted and invasive species would not be disturbed or introduced as a result of the project. The Preferred Alternative would not result in significant adverse impacts to vegetation.

Floodplains

All proposed site improvements would not occur within a FEMA designated floodplain and therefore floodplain areas would not be impacted. The Preferred Alternative would not result in significant adverse impacts to floodplains.

Wildlife and Protected species

All construction proposed under the Preferred Alternative would occur in previously disturbed and developed areas, there would be no impact to natural wildlife habitats. Although a pair of mallards (*Anas platyrhynchos*) and a Canada goose (*Branta canadensis*) were identified on-site, the open water area (OW1) that these game species occupied would not be impacted and their habitat would remain intact under the Preferred Alternative. As such, the project would comply with policies outlined in the Migratory Bird Treaty Act (MBTA) and the Executive Order on the Responsibility of Federal Agencies to Protect Migratory Birds (EO 13186). The proposed interior building renovations would have no impact on protected wildlife habitats, protected species, critical habitats, or species that have been observed on-site or species that are common to developed areas. The Preferred Alternative would not result in significant adverse impacts to wildlife and protected species.

3.10 Utility Service

3.10.1 Affected Environment

This section identifies the existing utility systems and sources that provide service to the HHS/CDC campus. The Roybal Campus is located within established grids of typical urban infrastructure and all required utilities are readily available. According to the HHS/CDC, all current utility demands are being met by existing utility suppliers.

Projected utility demands associated with the Preferred Alternative would be calculated during the design phase. Because of the long lead time (20 year development schedule), it is expected that all local utility service providers would be capable of adjusting system capacities to satisfy the demands of the Preferred Alternative upon completion, if required.

Electrical Service

Electrical Power is provided by the Georgia Power Company (GPC) by four (4) underground 19,800V feeders from GPC's Emory Substation to the central campus substation. The unit substation transformers reduce the voltage to 4,160V (5kV). Two (2) feeders provide service to the Roybal East Campus and two (2) provide service to the Roybal West Campus. The 4,160V (5kV) underground lines are connected to the buildings as a loop distribution and provide redundancy. The overall electrical distribution system is well maintained.

In addition to electrical service provided by GPC, the campus is also equipped with three (3) 2,000 kW, (3) 2,250 kW, (2) 1,500 kW and (3) 1,400 kW centralized stand-by emergency diesel generators to provide standby power to the campus' 5kV power distribution system. Another 300 kW diesel emergency generator is dedicated to serving a building at the center of the campus that has critical lab space.¹⁵⁹

Domestic and Fire Protection Water

Domestic water, used for domestic and fire protection purposes, is supplied to the existing Roybal Campus by the DeKalb County Water System. DeKalb County draws its water supply from the Chattahoochee River. Water is treated at the Scott Candler Filter Plant in DeKalb County which has the capacity to deliver approximately 128 million gallons of water per day to a population of over 600,000 people.¹⁶⁰

Domestic water is distributed throughout the campus by way of an underground network of water lines that are ultimately connected to two public water mains located on Clifton Road and Houston Mill Road.

¹⁵⁹ CDC. *CDC Roybal Campus 2025 Master Plan*. P.2-27.

¹⁶⁰ DeKalb County Department of Watershed Management. http://www.dekalbwatershed.com/scott_candler_filter.htm (May 2013).

The 12-inch Clifton Road service connections are as follows:

- one 8-inch and 4-inch domestic water connection;
- one 10-inch and one 8-inch fire service connection; and,
- one combined 8-inch service connection, which feeds 8-inch fire and domestic lines.

The 8-inch Houston Mill Road service connections are as follows:

- one 6-inch domestic; and,
- one 8-inch fire service.

On campus, the water supply system has separate domestic and fire protection networks, connected into a grid where feasible. This system provides service to all facilities within the secure area of the campus. Each facility is served by separate domestic and fire protection mains which are provided with appropriate backflow devices. Additionally, the system serves fire hydrants providing coverage for all buildings on campus.¹⁶¹

Natural Gas

Natural gas is supplied to the existing HHS/CDC campus with Atlanta Gaslight (AGL) owned gas lines and is purchased through Southstar Energy Services. The campus is served by two (2) incoming 4" AGL gas mainlines, one entering from Houston Mill Road and the other from Michael Street. Natural gas is supplied to existing facilities/structures on campus through an underground network of HHS/CDC-owned gas lines that are connected to the two (2) 4" AGL owned gas lines. Incoming gas pressure is 120 psi and is regulated down to 30 psi in the HHS/CDC-owned gas lines¹⁶².

Sanitary Sewer Service

Sanitary sewer service is provided by the DeKalb Sanitary District, which is designed to convey only municipal sewage, not stormwater. The wastewater collection and transmission system, which DeKalb owns and operates, includes approximately 2,600 miles of sewer lines, 55,000 manholes, and 66 lift stations.¹⁶³

All sanitary waste generated on campus is collected in a system owned and maintained by the HHS/CDC. This waste is then discharged into DeKalb County's sewer system by way of two (2) sewer lines. At the western half of the campus, the network of waste lines converge at the south end of the campus and pass under the railroad bed, connecting to an 8" sewer line that follows Peavine Creek. The eastern half of the campus is served by a branched network of lines originating in each existing building. This system collects at the southeast corner of the campus, where it discharges to a 12" line passing under the railroad bed and connecting to the Peavine Creek sewer line to the south. Campus generated sewage consists primarily of sanitary waste, with a minor amount flow generated by cleaning equipment and cooling waters.¹⁶⁴

¹⁶¹ CDC.CDC Roybal Campus 2025 Master Plan. p.2-23.

¹⁶² Ibid., p. 2-21.

¹⁶³ Water and Wastewater Systems 5-Year Capital Improvement Program and Financial Management Plan, 2010. http://dekalbwatershed.com/PDF/5-Year_CIP_Presentation.pdf (May 2013)

¹⁶⁴ CDC.CDC Roybal Campus 2025 Master Plan. p.2-24.

According to HHS/CDC personnel, all sanitary waste generated on-campus is directed to the RM Clayton Water Reclamation Center (WRC), by way of the DeKalb County owned and operated sewer lines. This facility is currently designed to treat an average daily maximum month flow of 122 million gallons per day (mgd).¹⁶⁵

Steam Service

The entire HHS/CDC Campus uses steam for building comfort heating, the heating of domestic hot water and for laboratory equipment use. The East Central Utility Plant (ECUP) and the West Central Utility Plant (WCUP), located on campus distribute steam throughout the campus at 115 psi. The steam piping, consisting of steam and condensate return pipes, is distributed through a series of tunnels and also by means of direct buried pipe. Most of the steam and condensate return piping has been installed in the last ten years and is in good condition. There are currently five (5) boilers that heat the water on-site with the use of natural gas.¹⁶⁶

Chilled Water

The primary use of chilled water is to provide for building air conditioning. Chilled water is produced at the on-campus ECUP and WCUP and is distributed at 42 degrees Fahrenheit through a series of tunnels or direct buried pipes. The total capacity of the WCUP chillers is 14,700 tons and the total capacity of the ECUP chillers is 7,660 tons.

According to HHS/CDC plant personnel, peak summer cooling needs vary from 12,000 to 14,000 tons for the entire Roybal Campus. The total capacity from both plants is approximately 22,360 tons. Accounting for the n+1 redundancy requirements in each plant, the total capacity is 18,895 tons. Accordingly, approximately 5,000 tons of additional capacity remains for campus expansion with the existing systems in place. Most of the chilled water piping currently in service has been installed in the last ten years and is in good condition.¹⁶⁷

Stormwater

The existing campus drains generally to the south and west with the overall topography of the site to four discharge points along the CSX Railroad right-of-way (ROW). These discharge points connect to culverts which cross the railroad ROW and discharge into Emory University's storm sewer system and then to Peavine Creek, which is located within the property of Emory University.

The Roybal Campus is divided into two main drainage basins, which are described as follows:

- The majority of the site drains to the existing stormwater detention pond which provides for both water quality and quantity control. The facility has been designed to meet local DeKalb County Stormwater Management Regulations. These regulations have changed during redevelopment of the campus and modifications have been made to the detention pond, as needed.

¹⁶⁵ RM Clayton WRC. <http://www.atlantawatershed.org/facilities/wrc/rmclayton.htm> (May 2013).

¹⁶⁶ CDC. *CDC Roybal Campus 2025 Master Plan*. p. 2-22.

¹⁶⁷ *Ibid.*, p. 2-24.

- The eastern portion of the campus is served by a system that includes the stormwater detention pond at the corner of Clifton Road and Houston Mill Road, and an underground system near the trans-shipping facility. The underground system includes both storage and structural water quality devices to meet the DeKalb County required suspended solids removal rate.

The remainder of the campus consists of two areas which bypass the on-campus stormwater controls. The first area includes the south parking deck and a small roadway segment (2.49 acres) and the last area includes only a small landscaped area (0.2 acres)¹⁶⁸. HHS/CDC currently measures turbidity levels of stormwater discharged from campus.

3.10.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, Master Plan improvements would not be implemented and the campus would continue to operate under current conditions. The projected employment increase of 865 individuals would result in a minimal increase in electricity, domestic water, natural gas consumption and the amount of sewage generated on-campus, as all employees would be accommodated within the existing office, laboratory and support spaces on-campus. The No Action Alternative would minimally increase demands on the heating or cooling systems and capacity improvements would not be required.

Under the No Action Alternative, impervious surfaces would not be constructed on-campus and consequently additional stormwater runoff would not be generated. The campus would continue to pursue projects to comply with more restrictive spill protection and NPDES regulations; and, to provide for the storage of stormwater for reuse. Compliance with these restrictions would improve the quality of stormwater discharges and would result in the reduction of domestic water use, respectively.

Executive Order 13514 Federal Leadership in Environmental, Energy, and Economic Performance, the *Energy Independence & Security Act of 2007* and the *Energy Policy Act of 2005* are all mandates that require federal agencies to support conservation. In response to these federal mandates, the HHS/CDC developed a Sustainability Policy that includes goals, guidelines and procedural changes to minimize the consumption of natural resources. With the implementation of the HHS/CDC Sustainability Policy, the HHS/CDC is committed to reducing the consumption of electricity, potable water and natural gas in the future. Specific commitments for sustainability include a 32 percent reduction in electricity consumption and a 26 percent reduction in potable water consumption by the year 2020. Refer to Section 3.12. Greenhouse Gases and Sustainability, of this document for additional information regarding these federal mandates.¹⁶⁹

The No Action Alternative would not induce growth to the extent that utility providers would need to increase capacity within their service areas.

¹⁶⁸ Ibid., p. 2-25.

¹⁶⁹ CDC.2011 CDC Annual Sustainability Report.

Preferred Alternative

The Preferred Alternative involves the construction of a new laboratory and parking deck, infrastructure improvements, building renovations and the addition of 1,485 on-campus employees.

Electrical Service

Minor interior modifications to building power supplies and distribution systems would be required for the proposed building renovations and an underground electric line would be required to service the proposed laboratory building. Construction of the new laboratory building and parking deck, and the addition of approximately 1,485 on-campus employees, would increase electricity demands on-campus. Capacity issues associated with campus improvements are not anticipated, as Georgia Power maintains available spare capacity for future growth. The Preferred Alternative would not result in significant adverse impacts to Georgia Power Grid or its service area.

Domestic and Fire Protection Water

Construction of the laboratory would require the extension of a new domestic and fire distribution line on-campus, but a new service connection would not be required. Minor modifications to the existing water supply lines at the parking facility would be required to accommodate the new footprint, while no changes would be required for the proposed building renovations. Proposed domestic water consumption is estimated to increase as a result of the new laboratory space and employment growth, but with the recent expansion of the Scott Candler Filter Plant, as well as future plans to increase capacity at this plant, capacity issues are not anticipated. The Preferred Alternative would not result in significant adverse impacts to the Scott Candler Filter Plant or its service area.

Natural Gas

Construction of the new laboratory would require the addition of a HHS/CDC-owned gas distribution line on-campus, but a new service connection would not be required. Building renovations, the new parking deck and proposed employment growth would result in a slight increase in gas consumption, however no modifications to the existing system would be required. Current supplies of natural gas are adequate to support the new proposed laboratory. The Preferred Alternative would not result in significant adverse impacts to Atlanta Gaslight or its service area.

Sanitary Sewer Service

Under the Preferred Alternative, the campus is projected to generate additional sewage resulting from the new laboratory building and the addition of 1,485 on-campus employees. Additional waste lines would be required on-campus to accommodate the new laboratory building, but new service connections would not be required. The proposed building renovations and parking deck would not require changes to the sewer lines. With the recent and planned upgrades to the DeKalb County Wastewater Collection and transmission systems and the RM Clayton WRC, capacity issues are not anticipated as a result of the Preferred Alternative. As such, the Preferred Alternative would not result in significant adverse impacts to DeKalb County's sanitary sewer service.

Steam Service

Under the Preferred Alternative, the new laboratory building would require the extension of steam branch lines and return pipes within an existing utility tunnel or through an existing building on-campus. Minor trenching required to extend the steam line could impact existing utilities and landscape lighting. Steam line extensions would not be required for the proposed parking deck and building renovations. According to the HHS/CDC facilities personnel, the five (5) existing boilers on campus are sufficient to heat the new laboratory building and renovated buildings. The Preferred Alternative, including the addition of 1,485 on-campus employees, would not result in significant adverse impacts to the HHS/CDC steam system.

Chilled Water

Under the Preferred Alternative, the new laboratory building would require the extension of chilled water and condensate return lines within an existing utility tunnel or through an existing building on-campus. Minor trenching, required to extend the water line and condensate return mains could potentially impact existing utilities and landscape lighting. Chilled water and condensate return main extensions would not be required for the proposed parking deck and building renovations. With the 5,000-tons of existing additional capacity, there would be sufficient capacity to accommodate the Preferred Alternative. The use of the proposed chilled water storage unit, with an ability to load shift approximately 4,000 tons, would provide for some electrical utility cost savings. The Preferred Alternative, including the addition of 1,485 on-campus employees, would not result in significant adverse impacts to the HHS/CDC chilled water supply.

Stormwater

The proposed laboratory building and parking deck would be constructed in existing parking lots and other areas containing impervious surfaces and consequently, additional stormwater runoff would not be generated on campus. The proposed building renovations and the addition of 1,485 on-campus employees would also not contribute to site-generated runoff. As such, additional storage capacity is not required, but to comply with current DeKalb County regulations for the removal of suspended solids and other pollutants, additional underground structural water quality devices would need to be installed underground.

Since the Preferred Alternative involves the disturbance of one or more acres of soil, a *National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction Activity* would be required to address construction related erosion, sediment and pollution issues. The Georgia Environmental Protection Division (GA EPD) administers NPDES Permits and authorizes stormwater discharges to the waters of the State of Georgia that result from construction activities. The GA EPD requires a NPDES Permit to include a Stormwater Pollution Prevention Plan (SWPPP), which establishes procedures for minimizing pollutants in stormwater discharges, including BMPs. BMPs would be implemented in compliance with Georgia's Erosion and Sediment Control Planning Manual and the DeKalb County Stormwater Management Manual. These manuals provide guidelines for what is required to effectively protect a site from erosion and subsequent sedimentation.

Proposed structural BMPs would include the placement of below ground stormwater treatment systems to remove oils and suspended solids from stormwater before being discharged. Additional proposed BMPs include limiting soil disturbance during construction and the vegetation of disturbed areas immediately upon the completion of construction. The implementation of BMPs would improve the quality of stormwater that is currently being discharged by the Roybal Campus.

The Roybal Campus would continue to pursue projects to comply with more restrictive spill protection and NPDES regulations and to provide for the storage of stormwater for reuse. Compliance with these restrictions would improve the quality of stormwater discharges and would result in the reduction of domestic water use, respectively. The Preferred Alternative would not result in significant adverse impacts to the storm sewer system.

Executive Order 13514 Federal Leadership in Environmental, Energy, and Economic Performance, the *Energy Independence & Security Act of 2007* and the *Energy Policy Act of 2005* are all mandates that require federal agencies to support the conservation of natural resources. In response to these federal mandates, the HHS/CDC developed a Sustainability Policy including goals, guidelines and procedural changes to minimize the consumption of natural resources. With this policy in place, the HHS/CDC is committed to reducing the consumption of electricity, potable water and natural gas in the future. Specific commitments for sustainability include a 32 percent reduction in electricity consumption and a 26 percent reduction in potable water consumption by the year 2020.¹⁷⁰ Refer to Section 3.12. Greenhouse Gases and Sustainability, of this document for additional information regarding these federal mandates.

¹⁷⁰ Ibid.

3.11 Waste

The following section characterizes the types of waste generated on the Roybal Campus and provides a discussion of potential impacts related to storage, handling and disposal of campus generated waste.

3.11.1 Affected Environment

The HHS/CDC manages solid, infectious and hazardous waste on campus. Waste is handled, stored and disposed of in accordance with local, state and federal regulations. The Roybal Campus generates standard municipal solid waste (MSW) which consists of nonhazardous waste commonly referred to as garbage or trash. This includes office waste, food waste, packaging waste, and grounds maintenance waste. This MSW is collected in dumpsters located on campus and removed off-site by commercial waste haulers. In 2012, approximately 800 tons of non-hazardous solid waste was generated on the Roybal Campus.¹⁷¹ Of this total approximately 579 tons of waste was disposed of at landfills and 221 tons of waste was recycled.¹⁷²

HHS/CDC's recycling program includes both single stream recycling and segregated recycling. Single stream recycling waste is collected by a commercial waste hauler. The segregated recycling program is coordinated with Emory University and includes recycling of paper, aluminum, cardboard, glass, and plastics. Waste is collected from the Roybal Campus by Emory Recycles and is transported to Emory's material recovery facility for further processing. The HHS/CDC also has a program in place for recycling wood pallets, gel ice packets and styrofoam.

Laboratory research activities at the Roybal Campus generate biomedical waste including potentially infectious waste. A detailed description of procedures used for handling and disposing of infectious wastes at the Roybal Campus are provided in Appendix G. Biomedical waste generated by research activities on campus include microbiological cultures, tissue cultures, fecal and blood specimens, animal waste, sharps, needles, and glassware. Biomedical waste is primarily regulated at the state level. Georgia requirements for handling, treatment, and disposal of biomedical waste are found in Rules of Georgia Department of Natural Resources, Environmental Protection Division, Biomedical Waste (GA DNT Rule 391-3-4-15).

Infectious waste generated at Roybal Campus is treated and disposed of in accordance with GA DNR Rule 391-3-4-15. Infectious waste is disinfected using the autoclaving method prior to disposal. Autoclaving is a process involving exposure to superheated, pressurized steam for a prescribed period of time in order to destroy microorganisms. In 2012, approximately 205 tons of infectious waste was autoclaved.¹⁷³ Laboratory wastes such as plastics, glass, paper and gloves, once disinfected are considered regular solid waste. This waste is disposed of similar to other regular solid waste on campus and removed off-site by commercial waste haulers to landfills, or is collected and recycled. Some disinfected waste such as animal carcasses are incinerated on-site. Other waste such as sharps, once disinfected is removed by a private contracted off-site for incineration.

¹⁷¹ CDC. Logistics Management Services Office.

¹⁷² Ibid.

¹⁷³ CDC. Office of Safety, Health and Environment. Permit-by-Rule Quarterly Waste Report. Treated Infectious Waste 2012

The Roybal Campus generates hazardous waste a result of laboratory research activities, campus operations and maintenance services on campus. Hazardous waste generated on campus includes halogenated and non-halogenated post process solvents, formalin base solutions and acidic and alkaline reagent solutions. Hazardous waste on campus is managed in accordance with the Resources Conservation and Recovery Act (RCRA). RCRA is a federal regulation governing the disposal of hazardous and non-hazardous waste. RCRA sets standards for treatment, storage and disposal of hazardous waste. HHS/CDC operates as a RCRA small quantity generator (SQG). A SQG generates more than 220 pounds (100 kilograms), but less than 2,200 pounds (1,000 kilograms) of hazardous waste per month.¹⁷⁴ Hazardous waste from satellite accumulation areas in laboratories and maintenance shops are collected and transported to 90-day accumulation area where waste is segregated and stored. All regulated hazardous waste are transported off-site by a private contractor and disposed of at a permitted facility in Hatfield, PA. In 2012, approximately 7.2 tons of chemical waste was disposed of from the Roybal Campus.¹⁷⁵

3.11.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there would be no major improvements to the Roybal Campus; however, the Roybal Campus employee population would grow by approximately 865 occupants. The character of the waste would remain the same, however the amount of waste generated on site would increase slightly due the additional employees on campus. Waste would continue to be handled in accordance with HHS/CDC policies and applicable state and federal regulations and transported off-site by contracted waste haulers.

Executive Order 13514 *Federal Leadership in Environmental, Energy, and Economic Performance* establishes goals to increase source reduction and to divert at least 50 percent of all non-hazardous solid waste from landfill or incineration by 2015.¹⁷⁶ HHS's Strategic Sustainability Performance Plan (SSPP) outlines goals for integrating sustainability into Department operations. The SSPP identifies pollution prevention and waste reduction as one of its main goals. HHS/CDC is expected to increase its recycling efforts to meet Executive Order 13514 mandate, as well as its SSPP goal of pollution prevention and waste reduction. HHS/CDC is committed to maintaining its recycling goal after the 2015 mandate year.

Preferred Alternative

The implementation of the Preferred Alternative would increase the employee population on the campus by approximately 1,485 occupants. The additional employees and related increase in laboratory and office operations would result in a moderate increase in waste generated on campus, however the character of the waste would remain the same. A new laboratory would moderately increase the amount of research activity occurring on campus and generate additional biomedical and hazardous waste. Construction of the new laboratory and renovation of the existing campus building would

¹⁷⁴ EPA. Wastes: Hazardous Waste Generators. <http://www.epa.gov/osw/hazard/generation/> (Accessed on May 20, 2012)

¹⁷⁵ CDC. Logistics Management Services Office.

¹⁷⁶ CDC. 2011 CDC Annual Sustainability Report.

temporarily increase the amount of construction debris. HHS/CDC would continue to dispose of waste in accordance with HHS/CDC policies and applicable local, state, and federal regulations. As discussed under the No Action Alternative, HHS/CDC is committed to diverting at least 50 percent of all non-hazardous solid waste from landfill and incineration in accordance with EO 13514 and HHH's SSPP. This mandate also applies to the disposal of construction waste. In 2012, HHS/CDC was able to recycle more than 50 percent of construction waste. Compliance with the mandate would divert a significant portion of new waste from landfills. Under the Preferred Alternative, significant adverse impacts related to waste generation are not anticipated.

3.12 Greenhouse Gases and Sustainability

3.12.1 Affected Environment

Climate Change and Greenhouse Gas Emissions

Climate change refers to the gradual increase or decrease in worldwide average surface temperatures, causing long-term fluctuations in weather patterns, with a tendency towards more severe storms. Greenhouse gases (GHG) are emitted into the atmosphere through natural processes and human activity. In recent history, human activities including the burning of fossil fuels and deforestation have increased the concentration of GHG emissions into the atmosphere. Consequently, global climate change as the result of the emission of greenhouse gases has become an issue of long-term and international significance. Some amount of GHG in the atmosphere is necessary to trap heat in the atmosphere keeping the planet warm; thereby maintaining a habitable climate. However, as GHGs continue to build up in the atmosphere, the heat trapped in the atmosphere increases causing a resultant increase in the average temperature of the earth worldwide. To date, no standards have been established to examine a project's effect on climate change, nor has the U.S. Environmental Protection Agency (USEPA) established thresholds for greenhouse gas emissions. As noted in Section 3.5. Air Quality, the Preferred Alternative's potential to increase greenhouse gas emissions would be discussed in relation to the anticipated changes in both VMT and fuel efficiency.

Typically, the main greenhouse gases that are emitted into the atmosphere as a result of human activity are: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Of the anthropogenic greenhouse gases, carbon dioxide is the most prevalently emitted from manmade uses, including internal combustion and the burning of other fuel materials.

Federal Sustainability Mandates

Executive Orders 13423 and 13514

Executive Order 13423, *Strengthening Federal Environmental, Energy and Transportation Management* requires federal agencies to conduct environmental, transportation, and energy-related activities in support of their respective missions in an environmentally, economically and fiscally sound manner.¹⁷⁷

Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance* builds upon the environmental performance requirements and energy reduction guidelines identified for federal agencies in Executive Order 13432. The purpose of Executive Order 13514, signed on October 5, 2009, is to establish an integrated strategy towards sustainability in the federal government and to make reduction of GHGs a priority for federal agencies. HHS/CDC's Office of Sustainability coordinates and monitors functions related to executive mandates.¹⁷⁸

¹⁷⁷ CDC. CDC Sustainability Implementation Plan 2012. Executive Summary

¹⁷⁸ CDC. 2011 CDC Annual Sustainability Report. p.3.

Federal agencies are required to meet a range of energy, water, and waste reduction targets under Executive Order 13514. These include:

- 30 percent reduction in vehicle fleet petroleum use by 2020
- 26 percent improvement in water efficiency by 2020
- 50 percent recycling and waste diversion by 2015
- 95 percent of all applicable contracts to meet sustainability requirements

HHS Strategic Sustainability Performance Plan

The White House Council on Environmental Quality and the Office of the Federal Environmental Executive (OFEE) oversee the execution of this federal mandate in all departments of the federal government. In leading the initiative for a greener federal government, CEQ has called upon agencies to submit a plan for embracing sustainability and meeting federal sustainability mandates.¹⁷⁹ As part of this effort, the Department of Health and Human Services (HHS) submits a Strategic Sustainability Performance Plan (SSPP) each year to the CEQ. The SSPP outlines ways to integrate sustainability into HHS operations. Sustainability categories such as greenhouse gas reduction, high-performance sustainable design, water use efficiency, pollution prevention and agency innovation are highlighted in the SSPP.

As an agency of HHS, CDC participates in HHS' overarching plan to meet these goals and is required to report on these annually. To that end, CDC has developed a Sustainability Implementation Plan (SIP) to outline how the CDC would address the HHS' SSPP targets in support of Executive Order 13514. Over the past several years significant progress has been made throughout government relative to sustainable practices. CDC has continued to advance and meet the targets set forth by the Executive Orders, HHS, and the agency. Sustainability improves the national health and provides a mechanism to support the achievement of HHS/CDC's public health mission as well as increasing the efficacy of fiscal resources entrusted to the HHS/CDC.¹⁸⁰ Areas of emphasis at the HHS/CDC-wide level include the integration of sustainability into all policies; the provision of sustainable education across the HHS/CDC workforce and community; and instituting metrics collection and evaluation. An overview of selected HHS/CDC sustainability goals pertinent to the campus level are listed below:

Greenhouse Gas Reduction and Maintenance of Agency Comprehensive Greenhouse Gas Inventory

- Reduce energy intensity in goal-subject facilities compared with FY 2003
- Reduce total energy intensity by 32.5 percent by FY 2020.
- Scope 1&2 GHG Emission Reduction Target 10.3 percent by FY 2020.
- Use of renewable energy as a percent of facility energy use: Total of 5.0/7.5 percent from renewable energy sources including at least half from new renewable sources
- Reduce the number of vehicle miles traveled (VMT) for commuting purposes

Buildings, ESPC Initiative Schedule, and Regional & Local Planning

- Beginning in FY 2020 design all new federal buildings that enter the planning process to achieve zero-net energy by FY 2030.

¹⁷⁹ CDC. 2011 *CDC Annual Sustainability Report*. p.2.

¹⁸⁰ CDC. *CDC Sustainability Implementation Plan 2012*. Executive Summary

- Comply with the “Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings” in all new construction, major renovation or repair and alteration of federal buildings.
- Demonstrate annual progress toward 15 percent conformance with Guiding Principles for applicable building inventory by FY 2015, and 100 percent, thereafter.
- Incorporate sustainable practices into agency policy and planning for new federal facilities. All lease activity shall be performed in accordance with applicable GSA standards, policies and procedures.
- Demonstrate use of cost-effective, innovative building and sustainable landscape strategies to minimize energy, water and materials consumption.
- Operate and maintain, and conduct minor repairs and alterations for existing building systems to reduce energy, water and materials consumption in a manner that achieves a net reduction in agency deferred maintenance costs and does not compromise OPDIV mission, health, safety or physical security.
- Optimize performance of the agency’s real property portfolio, dispose and consolidate excess and underutilized property, co-locate field offices, consolidate across metropolitan and regional locations.
- Reduce need for new building and field office space by utilizing technologies to increase telework opportunities and expand delivery of services (over the internet or electronically).

Water Use Efficiency and Management

- Reduce total water use intensity by 2 percent per year or 26 percent by FY 2020 from 2005 baseline.
- Reduce potable water consumption intensity by 20 percent by FY 2015 from approved 2007 baseline.
- Continually develop and improve leak detection strategies.

Pollution Prevention and Waste Reduction

- Increase source reduction of pollutants and waste
- Divert at least 50 percent non-hazardous solid waste by FY 2015

Renewable Energy

- Energy Independence and Security Act (EISA) requires agencies to reduce energy intensity by 18 percent for FY2011, compared to an FY2003 baseline; a 30 percent reduction is required by FY2015.

Current Energy Use and Environmental Performance of Buildings

The Roybal Campus contains a mix of laboratory, office and support space in 19 buildings, totaling approximately 3.8 million gsf. Approximately 51 percent of the campus consists of open space with the remaining area consisting of building footprints, surface parking and internal roadways. The first buildings on the Roybal Campus were occupied in the early 1960s. Since 1988, more than 1.3 million gsf has been incrementally added to the campus including Buildings 18, 19, and 21.¹⁸¹ Construction was completed on Building 24 in 2011. The emphasis of the 2000-2009 HHS/CDC Master Plan centered on the modernization and replacement of antiquated, overcrowded facilities that had reached the end of their functional life span. As a result, the average physical condition of Roybal Campus assets, also known as Condition Index (CI) improved from 68 at the beginning of the 2000 to 2009 planning period to

¹⁸¹ CDC.CDC Roybal Campus 2025 Master Plan. p. 2-12

99 at the end. A CI rating of over 90 meets the Federal Real Property Council's (FRPC) criteria for good building condition.¹⁸²

The HHS/CDC has instituted a number of initiatives at the Roybal Campus in order to meet federally mandated targets. These practices are discussed below.

Waste Reduction and Recycling. As previously mentioned the mandated recycling target is a 50 percent reduction in non-hazardous waste, demolition and construction waste by 2015. The HHS/CDC recycling program includes both single stream recycling and segregated recycling. Single stream recycling waste is collected by a commercial waste hauler. The segregated recycling program is coordinated with Emory University and includes recycling of paper, aluminum, cardboard, glass, and plastics. Waste is collected from the Roybal Campus by Emory Recycles and is transported to Emory's material recovery facility for further processing. The HHS/CDC also has a program in place for recycling wood pallets, gel ice packets and Styrofoam. The HHS/CDC is currently shifting towards single stream recycling which has higher diversion rates. At present, the HHS/CDC is moving forward to meeting its goal of 50 percent recycling by 2015. Post-2025, HHS/CDC would continue to maintain the 50 percent standard, unless new goals are mandated in the future. Additionally, in 2012, greater than 50 percent of construction and demolition waste and 28 percent of non-hazardous waste was recycled at the campus.

Water and Energy Efficiency. With the implementation of the HHS/CDC Sustainability Policy, the HHS/CDC is committed to reducing the consumption of electricity, potable water and natural gas in the future. Specific commitments for sustainability include a 32 percent reduction in electricity consumption and a 26 percent reduction in potable water consumption by the year 2020. In terms of water usage, HHS/CDC is committed to the use of low-flow fixtures and devices as well as the reuse of stormwater for irrigation on campus. Newer campus buildings such as Building 24 are energy-efficient and have generally incorporated sustainable design measures to the extent practicable. These measures include light emitting diode (LED) lighting, day lighting of buildings, the implementation of light reduction programs as well as solar panels. Energy savings have also resulted from rebalancing air flow in buildings and modifying building hours of operation to reduce operating time. Temperature settings in campus buildings are typically set at 76 in the summer and 68 in the winter.

These measures have helped to achieve an overall reduction in campus energy, as shown in Table 3.12-1. Energy intensity at the Roybal Campus has been reduced approximately 27.9 percent from peak intensity of 380,796 British Thermal Unit (BTU) per gross square foot (BTU/gsf) in 2004 to 2274,508 BTU/gsf. Similarly, water usage at the Roybal Campus was reduced by over 37.1 percent between peak intensity in 2002 to 2011. However, from 2011 to 2012 the water usage increased from 58.2 to 108.5 likely due to the commissioning of a new laboratory building on campus. HHS/CDC is investigating this increase in water consumption.

¹⁸² Ibid. p. 2-5.

Table 3.12-1: Roybal Campus Energy and Water Intensity

FY	Energy Intensity (BTU/GSF)	Water Intensity (kGAL/GSF)
2001	350,766	86.8
2002	366,239	92.6
2003	380,688	80.1
2004	380,796	79.1
2005	360,749	85.6
2006	267,894	78.0
2007	344,682	78.8
2008	280,520	69.7
2009	280,788	70.2
2010	289,337	65.2
2011	274,508	58.2
2012	264,513	108.5

Source: HHS/CDC Office of Safety, Security, and Asset Management

Additional Campus Sustainability Initiatives

A number of other measures are currently within the federal government, HHS, and the Roybal Campus relative to sustainability. The HHS Go Green Commuter Survey reached 16,500 federal employees with a response rate of approximately 20 percent. This commuting behavior survey indicated that 38 percent of HHS employees have an alternative or compressed work schedule and 27 percent telework regularly. Over 95 percent of federal respondents practice daily energy conservation.

HHS/CDC has improved their telework program since its inception in 2008. As of 2011, approximately 42 percent of eligible employees participated in a regular, recurring telework arrangement at least two days per pay period. In 2011, HHS/CDC's telework program was cited by Georgia Governor Nathan Deal and the Clean Air Campaign as one of the top five employers in the state supporting telework. Similarly, the HHS/CDC was awarded a PACE award from the Clean Air Campaign. The PACE awards program recognizes the best commute options programs which help to advance cleaner air and lessen traffic in the State of Georgia. Additionally, the Roybal Campus has instituted a long-term locker program for bicycle commuters. This program offers a locker on a quarterly basis for program participants. Lock facilities are in Buildings 12, 21, and 24 on the campus.¹⁸³ Other measures the HHS/CDC has implemented to conserve energy and resources include the using the "green meeting" concept. These meetings feature teleconference options, electronically circulated meeting materials, and online file sharing. The intent of this concept is to reduce the environmental footprint of the meetings through the reduction in the consumption of resources like paper, materials, and food service items. The HHS/CDC engages in double-sided printing, as well as document and electronics recycling. The agency has also shifted recently to a single computer model (laptop) which reduces the need to purchase desktop computers for the nearly 3,000 teleworkers at HHS/CDC. Paperless, electronic, administrative reporting systems have helped to save the cost of clerical supplies as well as over 200,000 sheets of paper annually.

¹⁸³ CDC. 2011 CDC Annual Sustainability Report.

As previously mentioned in Section 3.4. Transportation, the HHS/CDC engages in a clean commuter program designed to shift employee travel habits to modes other than a single-occupancy vehicle. Alternative modes of travel include carpooling, vanpooling, public transit and bicycling.

3.12.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, the implementation of the Master Plan would not occur. New campus improvements designated for the 2015-2025 planning period would not take place. As indicated above, the HHS/CDC both from an agency-wide and campus perspective is moving towards meeting or exceeding the targets associated with federal sustainability mandates. It is anticipated that in the future without the Master Plan, the HHS/CDC would continue to institute sustainability practices and programming in order to meet or surpass these federally mandated sustainability thresholds.

GHG emissions associated with the No Action Alternative are described below in comparison to the emissions associated with the Preferred Alternative.

Preferred Alternative

Under the Preferred Alternative, the HHS/CDC would continue to comply with or work towards compliance with all federal regulations pertaining to sustainability. HHS/CDC would focus on the continued implementation of a number of sustainable practices. These include reducing the overall consumption of water and power by adopting operation and maintenance standards, designing for local climate and conditions, improving outdoor gathering space, and encouraging bicycling

As indicated in Executive Orders 13423 and 13514, the federal government is committed to the goals of energy conservation, reducing energy use, eliminating or reducing greenhouse gas emission and promoting the deployment of cleaner and more efficient renewable energy technologies. To that end, under *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions*, dated February 18, 2010, the CEQ has directed federal agencies to consider whether analysis of the direct and indirect GHG emissions from their proposed action may provide meaningful information to decision makers and the public. Specifically, if a proposed action would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of CO₂ equivalent (mtCO₂e) on an annual basis, agencies should consider this an indicator that a detailed assessment may be meaningful to decision makers and the public. CEQ does not propose this as an indicator of a threshold of significant effects, but rather as an indicator of a minimum level of GHG emission that may warrant some description in the appropriate NEPA analysis for agency actions involving direct emission of GHGs.¹⁸⁴

It is anticipated that carbon dioxide CO₂ emissions associated with the construction of the laboratory space would be significantly below the 25,000 mtCO₂e on an annual basis. More specifically, new structures constructed under the Preferred Alternative would incorporate sustainable measures and

¹⁸⁴ Council on Environmental Quality. *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions*. February 18, 2010. p. 3.

energy reduction measures into design. EISA-2007 Section 433 also requires new federal buildings to be designed to reduce fossil fuel-generated energy consumption, as compared with similar building data in the Commercial Building Energy Consumption Survey of 2003, by 80 percent starting in 2020 and by 90 percent starting in 2025.

The majority of vehicular greenhouse gas emissions are carbon dioxide, a natural product of fossil fuel combustion directly related to VMT and vehicle fuel economy. Relatively small amounts of methane and nitrous oxide are also emitted during combustion and contribute to global warming. Together with carbon dioxide, methane and nitrous oxide are expressed below as carbon dioxide equivalent (CO₂e), an aggregate quantity used to assess global warming potential. As shown in Table 3.12-2, although total VMT is anticipated to increase under the No Action Alternative and Preferred Alternative, the total emissions would decrease due to regulations intended to improve average vehicle fuel economy between 2012 and 2025, resulting in less fuel consumed per VMT. This analysis of the Preferred Alternative also incorporates vehicle start emissions from the proposed parking deck facility. Appendix H provides the technical analysis documentation for all calculations relating to GHG emissions.

Table 3.12-2: Tons of Greenhouse Gas Emissions

Parameter	2012	2025		% Change Between Existing and No Action Alternative	% Change Between No Action and Preferred Alternative
	Existing	No Action Alternative	Master Plan Alternative		
CO ₂ (Tons)	8,864	6,682	7,929	-11%	19%

Source: HHS/CDC Royal Campus Commuter Count and Parking Assessment, July 19, 2012; HHS/CDC/ATSDR Annual Transportation Survey, February 2013; U.S. EPA Climate Leaders Program, Technical Guidance, Optional Emissions from Commuting, Business Travel, and Product Transport, see: http://www.epa.gov/stateply/documents/resources/commute_travel_product.pdf; 2017-2025 Model Year Light-Duty Vehicle GHG Emissions and CAFÉ Standards: Supplemental, National Highway Traffic Safety Administration, July 29, 2011.

The implementation of the Preferred Alternative would not result in major emissions of GHG. As noted in Table 3.12-2, GHG emissions would be well under 25,000 mtCO₂e. As a result, the Preferred Alternative would not result in significant adverse impacts to greenhouse gas generation, climate change or sustainability.

3.13 Construction Impacts

The purpose of this section is to summarize the anticipated impacts during construction associated with the Preferred Alternative. In order to minimize potential adverse impacts during construction, the proposed planned improvements would be designed, scheduled and staged to minimize disruption. In addition, Best Management Practices (BMPs) would be applied during construction to minimize the duration and severity of these effects. The types of materials and practices that are typically used to minimize any adverse impacts generated during construction are briefly described below.

The phasing and implementation for the Master Plan improvements would be implemented in a series of stages over a ten year planning period as indicated in the Master Plan subject to authorization and funding of projects through the HHS/CDC, HHS, OMB and Congressional budget process.¹⁸⁵ Construction time frames for the Master Plan improvements are estimated and may change as the design process is further advanced and/or as more detailed studies are conducted. Phase I of the Building 15 renovation (BSL2, BSL3 tower and infrastructure) is anticipated to begin in 2015 within completion scheduled for 2017. The South East Parking Deck and Infrastructure Project would be constructed between 2017 and 2018. Phase 2 of the Building 15 renovation (BSL4) would commence in 2023 with projected completion in 2024. In addition, construction of the new laboratory facility is estimated to begin in 2020. The staging area for construction equipment and materials storage would be self-contained within the Roybal Campus.

No Action Alternative

Under the No Action Alternative, no new construction or any major renovations or infrastructure improvements would occur on campus.

Preferred Alternative

Construction-related impacts for several key technical areas analyzed in the DEIS are presented below.

Transportation

Nominal, temporary, changes to travel patterns are anticipated as all construction activities including the movement and repositioning of oversized machinery and/or materials would occur on a portion of the expansive, self-contained Roybal Campus. In addition, roadway or lane closures are not anticipated in the Study Area as construction activities associated with the Preferred Alternative would be limited to the Roybal Campus. Temporary staging would be provided for construction workers on the Roybal Campus. It is also anticipated that the majority of construction workers would be travelling to and from the campus outside of commuter peak background a.m. and p.m. travel periods. No significant adverse construction-related traffic impacts are anticipated as a result of the Preferred Alternative.

Additional capacity for construction worker parking would be made available on a temporary basis on campus during construction. No significant parking impacts are expected in the Study Area as a result of the Preferred Alternative.

¹⁸⁵ CDC. *Roybal Campus 2025 Master Plan*. p.3-2

Construction activities may result in temporary disruptions to pedestrians within the Roybal Campus. Narrowing of pedestrian sidewalks and temporary use of pedestrian sidewalk bridges surrounding campus construction areas may occur due to construction activities. However, construction activities are not anticipated to result in significant adverse impacts to pedestrian conditions within the Study Area. Mass transit impacts are unlikely as a result of construction activities associated with the Preferred Alternative since the majority of construction workers are anticipated to drive to campus. Pedestrian safety measures including signage and pedestrian crossings would be placed in the vicinity of construction areas to ensure pedestrian safety.

Hazardous Materials and Subsurface Conditions

The Roybal Campus was evaluated to determine the potential for encountering unexpected hazardous materials and waste during construction. According to interviews with CDC staff, there are no known environmental site conditions on the campus.¹⁸⁶ The Roybal Campus had undergone major redevelopment over the last twenty years, and the majority of the campus has undergone extensive grading and excavation during construction. Evaluation and testing of site conditions was undertaken as part of the previous phases of construction. Any recognized environmental conditions encountered were addressed in accordance with applicable state and federal regulation prior to commencement of construction activity.

Proposed improvements under the Preferred Alternative would occur on land that has been previously disturbed. Previous construction has occurred on the areas which are proposed for improvement and the locations are not known areas of hazardous contamination. Prior to any future construction, in accordance with HHS/CDC design and construction standards, the appropriate site investigation would be conducted to confirm that there are no recognized environmental site conditions. Should these investigations reveal any potential contamination, all necessary remediation action would be implemented prior to commencement of construction activity.

Fugitive Dust

Fugitive dust is defined as natural or man-made dust that becomes airborne due to wind or human activity. Fugitive dust is typically generated during demolition and construction operations that expose or handle soil, such as site clearing, excavating, cutting and filling, and grading operations. The quantity of dust generated during construction depends on the construction practice, frequency of operations, and weather and soil characteristics. Fugitive dust resulting from heavy outdoor construction is generally short-term and confined to the vicinity of construction site (i.e., normally within 500 feet).

The following mitigation measures would be employed during construction at the HHS/CDC Roybal Campus to control fugitive dust:

- Open bodied trucks carrying loose materials would comply with applicable state regulations.
- Areas disturbed by construction would be seeded and stabilized.
- Stabilized stone construction entrances would be provided.

¹⁸⁶ Interviews with CDC Staff. Captain Edward Dieser, Office of Safety, Health and Environment (April 3, 2013) and George Chandler, Senior Advisor (May 29, 2013)

- Spray-on adhesives would be applied to mineral soils
- High dust areas would be kept wet to prevent airborne dust.

Interior demolition activities would involve the use of drop cloths, drapes, barriers and partitions to control dust and dirt that can be spread by tracking air currents.

Air Quality

Construction-related air quality impacts would be temporary and limited to the construction period. These impacts would be limited to short-term, increased fugitive dust and mobile source emissions that would cease with the conclusion of construction. Fugitive dust is airborne particulate matter, generally of a relatively large particulate size. Construction-related fugitive dust is generated by construction activities such as concrete demolition, haul trucks, concrete trucks, delivery trucks and earth-moving vehicles operating around a development site. Construction activities cause particulate matter to become re-suspended (kicked-up) as a consequence of various activities including vehicle movement over paved and unpaved surfaces, site preparation, dirt tracked onto paved surfaces from unpaved areas at access points, and material blown from areas of exposed soils.

A number of mitigation measures would be utilized to minimize or eliminate temporary air quality impacts created during the construction phase of the Preferred Alternative. The application of various control measures during construction activities would be employed to minimize the amount of construction dust generated. These measures include:

- Application of water or other soluble moisture-retaining agents to dirt areas;
- Cleaning construction equipment and adjacent paved areas that may be covered with dirt or dust;
- Covering haul trucks carrying loose materials to and from construction sites;
- Use of clean fuels in construction equipment;
- Deployment of clean diesel construction equipment (new, retrofit, rebuilt or repowered); and,
- Implementation of anti-idling practices at construction sites.

Construction equipment would also create gaseous emissions such as hydrocarbons and nitrogen oxide emissions as well as particulate matter from diesel engines. However, the fact that dust and gases would be released into the air would be inconsequential because the intermittent usage of this equipment makes their effect on air quality negligible. Consequently, the extent to which these pollutants are released would not have an effect on the surrounding area and would not endanger public health.

Carbon monoxide is the principal pollutant of concern when considering localized construction-induced air quality impacts of motor vehicles. While the presence of construction trucks and equipment would slightly increase CO levels in the area, these emissions would not be significant compared with the emissions from roadway vehicle traffic. Coordination of construction activities with movement of equipment and workers would reduce the potential for emissions.

Soil Erosion Control

During the construction phase, soil and slope stabilization measures would be implemented to reduce soil movement and potential erosion during construction. Since the Master Plan improvements would involve the disturbance of one or more acres of soil, a *General Permit for Discharges of Storm Water Associated with Construction Activity* would be required. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which is required to incorporate a site specific erosion and sediment control plan.

The erosion and sedimentation control plan would be implemented to control and reduce sediments from entering storm drains and/or adjacent areas. Stormwater detention areas would also be incorporated into the design to capture post-construction runoff and improve water quality in the area.

Provisions in the construction contract would require the contractor to exercise every reasonable precaution during construction to prevent the pollution of streams in the project vicinity. Where possible, early re-vegetation of disturbed areas would be implemented to minimize soil movement. Dumping of chemicals, fuels, lubricants, bitumens, raw sewage, or other harmful wastes into or alongside of streams, impoundments, natural channels, or manmade channels leading thereto, would be prohibited. Additional contract provisions would require the use of temporary erosion control measures, as deemed necessary during construction. These temporary measures may include the use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains, and other erosion control devices or methods, as applicable. These provisions are coordinated with permanent erosion control features insofar as practical to ensure economical, effective, and continuous erosion control throughout the construction and post-construction periods, and are in accordance with the Federal Aid Policy Guide, Part 650, Subpart B.

Noise

Construction activities would result in short-term noise impacts on receptors in the immediate vicinity of the Roybal Campus construction areas. Noise levels during construction would include noise from construction and delivery vehicles traveling to and from the site and noise from operating construction equipment. The extent of impact from these sources would depend on the nature of the construction, the noise characteristics of the equipment operated and their duration of utilization, the construction schedule and the distance to the noise-sensitive receptors from the construction site boundary.

In general, construction typically occurs during the daytime working hours of 7 a.m. to 7 p.m. which complies with the *DeKalb County Noise Ordinance*. Construction activities are also permitted between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays. The majority of the equipment likely to be employed in construction would be earth-moving equipment (backhoe and dump truck), groundbreaking equipment, and pile drivers for structures. Average noise levels measured in dBA at 50 feet for this equipment would range between 72 and 101 dBA (see Table 3.13-1). Based on typical usage factors of 0.3 (i.e., equipment is operated 30 percent of the time), a typical scenario of a crew operating one backhoe, one bull dozer and one dump truck can expect an hourly Leq of 85 dBA at a distance of 50 feet. Based upon a 6-dBA drop-off rate per doubling of distance, short-term construction noise levels associated with this operation would be approximately 66 dBA at a distance of 500 feet from the point of construction. With the addition of a pile driver, the sound level at 500 feet would increase from 66 to 82 dBA. These sound levels are indicative of temporary construction noise potentially reaching Sorority

Village at Emory University, the nearest residential site to the proposed parking deck at a distance of approximately 500 feet. Construction activity would result in temporary noise impacts and would cease once construction is completed.

Table 3.13-1: Typical Construction Equipment Noise Emission Levels

Equipment Item	Noise Level (dBA at 50 Feet)
Air Compressor	81
Asphalt Spreader (Paver)	89
Asphalt Truck	88
Backhoe	85
Compactor	80
Concrete Spreader	89
Concrete Mixer	85
Concrete Vibrator	76
Crane (derrick)	88
Dozer	87
Dump	88
Front End Loader	84
Gas-Driven (Vibro-compactor)	76
Generator	76
Hoist	76
Jackhammer (Paving Breaker)	88
Motor Crane	83
Pick-up Truck (light)	72
Pile Driver / Extractor	101
Pneumatic Tools	76
Pump	76
Rock Drill	98
Roller	80
Scraper	88
Shovel	82
Truck (Medium and Heavy)	84

Source: Harris, C.M. "Handbook of Noise Control," Second Ed. McGraw Hill, New York, 1979

The magnitude of construction-generated noise impacts could be reduced or eliminated by utilizing a number of mitigation measures, including:

- Temporary sound walls;
- Alternative construction methods such as vibration or hydraulic insertion instead of traditional pile driving;
- Baffled diesel generators or use of electric generators instead of diesel;
- Specifying adequate muffler systems on construction equipment that requires combustion engines, and requiring that vehicles and equipment are properly maintained and operators trained;
- Modifying equipment with dampeners to reduce noise as a result of vibration; and,
- Aprons (sound absorptive mats that are hung from equipment)

Specific guidance and contract specifications would be developed prior to implementation to address construction actions. If necessary, special construction methods would be specified as part of the construction contract documents. A basic set of construction noise abatement measures would be included in the construction specifications. All equipment would have sound control devices and would comply with pertinent equipment noise standards of the U.S. Environmental Protection Agency (USEPA) and the Occupational Safety and Health Administration (OSHA).

Over all, in order to reduce the potential impacts during construction, the Preferred Alternative improvements would be planned, designed, scheduled, and staged to minimize disruption to the Roybal Campus, nearby facilities, and the environment. Although some interference is unavoidable, the duration and severity of these effects would be minimized by the continued implementation of strong controls and effective scheduling of construction. Construction-period effects would be temporary and would not result in any significant impacts to land use, public policy, socioeconomic conditions, and urban design and visual resources. The Preferred Alternative is not anticipated to result in any severe disruptions to campus operations given that many of the proposed Master Plan improvements such as the construction of the new laboratory space are located in the eastern quadrant of the Roybal Campus separated from the inner core campus uses. The Preferred Alternative would not result in significant adverse construction impacts.

3.14 Indirect and Cumulative Impacts of the Preferred Alternative

Projects can result in changes to an area's social and natural environment that are not captured in the analysis of the project's direct impacts. Indirect and cumulative impacts are evaluated to understand major changes that may occur related to a proposed project in the future beyond the project build year, or with regional implications, when added to other proposed actions in the Study Area. The CEQ defines direct impacts as effects which are caused by the action and occur at the same time (40 CFR § 1508.8). Indirect impacts are environmental impacts caused by the Preferred Alternative that occur later in time or farther removed in distance, but are still reasonably foreseeable (40 CFR § 1508.8). Indirect impacts may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR § 1508.8).

Cumulative impacts, as defined by CEQ, result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR § 1508.7). Cumulative impacts take into account the impact of the projects within the context of all other actions in the vicinity that have either already been completed, are currently being undertaken or would occur in the future. A project on its own may not result in significant impacts, however, over time in combination with other actions, could result in environmental degradation.

Methodology

Geographic Area and Timeframe

The indirect and cumulative impacts were assessed based on the information presented in previous sections of the DEIS, which identifies existing conditions, and potential project-related direct impacts. The Study Area for the cumulative analysis generally follows the 1-mile Study Area identified for the direct impact analysis, which was conservatively derived in excess of NEPA guidance. The 1-mile Study Area was intentionally chosen for the environmental analysis in order to encompass a broader geographic extent and ensure inclusion of potential direct, indirect and cumulative impacts.

Cumulative impacts take into consideration the past, as well as current and foreseeable future actions. For the purpose of the analysis, the foreseeable future conditions were evaluated for the 2025 project horizon. A discussion of past, current, and future trends is provided below.

Historic Context and Trends

The Roybal Campus is located in DeKalb County, just outside the limits of the City of Atlanta, within an area commonly referred to as Druid Hills. In the early twentieth century, Druid Hills was planned by Frederick Law Olmstead, Sr. as Atlanta's second suburban development. This historic neighborhood and the surrounding areas of DeKalb County offered convenient proximity to the City of Atlanta and also provided an ample supply of developable land. These characteristics were attractive to both residents

wanting to live in a bedroom community near Atlanta as well as institutions requiring large amounts of land. In the 1920s, DeKalb County was much different than today containing a great deal of agricultural development with a residential population of approximately 44,000 residents based on historic census data. Historically, the residential neighborhoods within the Study Area have developed and coexisted with these large entities as well as Emory University since the establishment of its main campus in 1916. These areas, including what is now known as the University Park/Emory Highlands/Emory Estates Historic District, also provided moderately priced housing for staff and faculty of these nearby institutional and academic uses.

After World War II, the passage of the GI Bill brought an influx of students to Emory University along with the introduction of new academic and graduate level programming. Emory University's student population was further expanded with the admission of women to the university in 1953. These changes necessitated the physical expansion of its campus to include new student residences, research buildings and the expansion of Emory Hospital.¹⁸⁷ Emory University continued its emphasis on development in the 1970s and 1980s with the construction of a number of facilities including its library, the first building with significant height in the area, and the Emory Clinic B building.¹⁸⁸

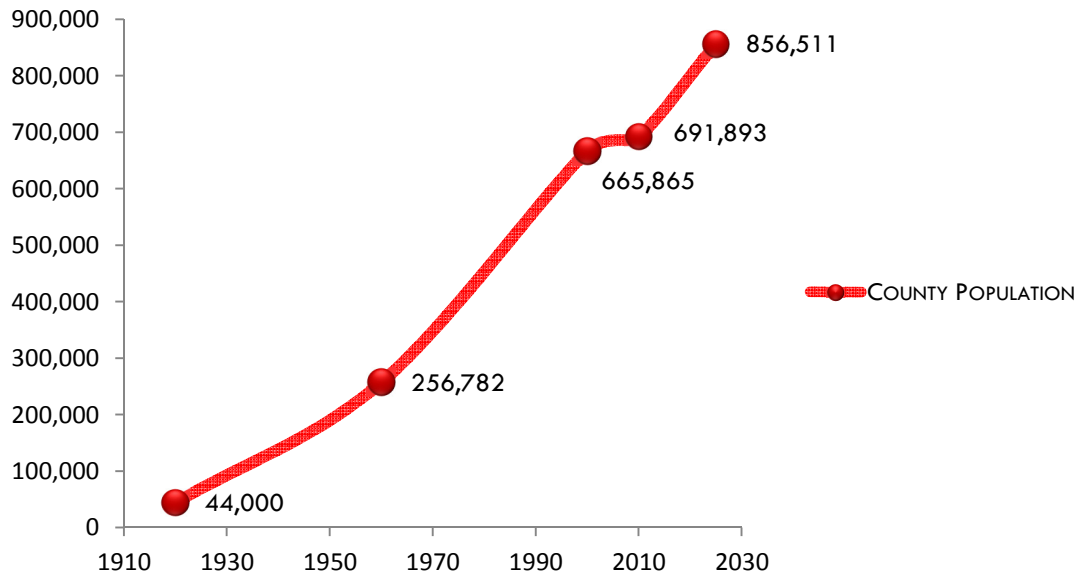
In 1947, Emory University deeded the original 15 acres of what is now the Roybal Campus to the HHS/CDC. During the late 1950s, when initial construction began on the Roybal Campus, the county shifted to a suburban density as its population increased to 256,782 by 1960, an increase of approximately 482 percent from 1920.¹⁸⁹ More recently, over the last two decades, the HHS/CDC has developed its facilities and infrastructure in response to various global health needs and crises including HIV, hepatitis, influenza and malaria. The evolution of the HHS/CDC's critical public health mission and the pressing need to replace, expand and/or modernize antiquated, overcrowded and technologically inferior 1950s era facilities has resulted in an increase in campus growth as well as major physical growth within the self-contained Roybal Campus. In the late 1990s, the Roybal Campus nearly doubled in size as a result of the acquisition of approximately 19.1 acres of land west of Michael Street. This acquisition was required for campus expansion as well as the provision of the security setback zone. Over the last decade, other major on campus projects have included new laboratory facilities, office space, utility upgrades and parking.

Corridor-wide institutional growth has generally created some conflict with the surrounding community centered on quality of life issues as these institutions have evolved in an attempt to meet their respective missions. As seen in Figure 3.14-1: Historic and Projected Population of DeKalb County (1920 to 2025), the county-wide population has increased steadily over time. Between 2000 and 2010, the county population increased by approximately 4 percent. However, by 2025 the population of DeKalb County is forecasted to increase by approximately 24 percent from 2010 population levels. The Atlanta Metropolitan Statistical Area is also one of the fastest growing regions in the nation, with a projected population increase of approximately 32 percent during the same time period. In addition, the total employed civilian population within the county is anticipated to increase by almost 19 percent (an additional 74,405 jobs) between 2010 and 2025.

¹⁸⁷ Goody Clancy prepared for the Clifton Community Partnership. *Clifton Corridor Urban Design Guidelines*. December 2008. p. xviii.

¹⁸⁸ Ibid, p. xviii.

¹⁸⁹ U.S. Census Bureau. *Georgia, Population of Counties by Decennial Census: 1900 to 1990*.

Figure 3.14-1: Historic and Projected Population of DeKalb County (1920 to 2025)

Source: US Census Historical data and ARC Plan 2040

Current Context

The Roybal Campus is located within the Clifton Corridor, which is one of the largest employment centers in DeKalb County and the Atlanta region. Aside from the HHS/CDC, a number of large institutional uses focused on education, health care and medical research are concentrated within the Clifton Corridor. These prominent institutional uses, comprising approximately 22 percent of land use within the Study Area, include Emory University, Emory University Hospital and associated Emory Healthcare facilities, Atlanta VA Medical Center, Children's Healthcare of Atlanta at Egleston, and Wesley Woods Center. These institutions are significant economic generators, employing at least 31,239 individuals within the Clifton Corridor.¹⁹⁰ These major institutions are also predominantly surrounded by well-established residential neighborhoods. Although the Clifton Corridor is one of the largest activity centers in the region, there is a lack of adequate transportation infrastructure with no direct access to commuter rail or the interstate highway system.

In combination, these institutions form a biomedical cluster, which represents one of the most vibrant growth industries in the county and region.¹⁹¹ While the emphasis in terms of major economic growth has been on health science and medical sectors, the county's *Comprehensive Plan* also acknowledges that there is little room or vacant corridor land available for expansion aside from density and height

¹⁹⁰ Employment figure based on staffing numbers provided by Emory University, Emory University Hospital, Emory Healthcare, The Emory Clinic, Atlanta VA Medical Center, CDC, Wesley Woods Center and Children's Healthcare of Atlanta.

¹⁹¹ DeKalb County Strategic Planning Division Department of Planning and Development. *DeKalb County Comprehensive Plan 2005-2025: Community Assessment*. May 2007. p. 89.

increases on existing parcels.¹⁹² The Roybal Campus has evolved in order to meet the scope of its changing mission; however, other major institutions within the Clifton Corridor including Emory have also grown at similar or greater densities. Additionally, there is high demand for space within the Clifton Corridor among private health-related companies and laboratories that wish to be co-located near these internationally renowned institutions. This demand cannot be met within the area's physical boundaries.¹⁹³

Current and Future Development

Table 3.14-1 identifies current projects presently under construction and other future development and transportation actions within the Study Area boundary that have the potential to result in cumulative impacts. The development and transportation projects consist of projects which are currently under construction, projects which are planned to occur or likely to occur in the future based on available information. Information on other development and transportation projects was obtained from DeKalb County planning department list of approved projects, interviews with DeKalb County officials, interviews with major Study Area institutions, interviews with staff from ARC, GRTA, GDOT and the ARC Regional Transportation Plan (FY 2012-2040).

Table 3.14-1: Area Development and Transportation Projects

Other Projects	Description	Location	Relationships to Preferred Alternative	Status
Development				
Current Construction				
Emory Point	Phase II of Emory Point would include 43,000 gsf of retail space, a 600 space parking deck, and 300 residential units. Phase III is zoned for an additional 200 apartments and 300 parking spaces.	1627 Clifton Road	Within Study Area	Phase II to be completed 2014. Phase III - approved.
Emory University Hospital	Emory HealthCare is constructing a new nine-story, 210 hospital addition.	Corner of Clifton Road and Gambrell Drive	Within Study Area	To be completed 2017.
Emory University Candler School of Theology Phase II	Emory University is constructing a 70,000 gsf addition to the Candler Theology Building.	1531 Dickey Drive	Within Study Area	To be completed 2014.
Emory University Freshman Phase Five Residence Hall	Emory University is constructing a new 105,000 gsf residence facility.	Asbury Circle	Within Study Area	To be completed 2014.
Emory University Yerkes Regional Primate Center	Emory University is constructing a new 20,000 gsf addition to the facility.	Emory University	Within Study Area	To be completed Fall 2013.
Emory University Chemistry Center Addition	Emory University is constructing a 70,000 gsf, 5-story addition to the Atwood Chemistry Center.	Dowman Drive	Within Study Area	To be completed Fall 2015.
Future Construction				
Emory University Student Center Addition	Emory University is proposing to construct a 50,000 gsf expansion of the Student Center.		Within Study Area	Planning Stages
Emory University School of Nursing	Emory University is proposing to construct a new research building.	Houston Mill Road	Within Study Area	Planning Stages
Emory University Clairmont Campus	Emory University is proposing to expand the Clairmont Campus	Starvine Way	Within Study Area	Planning Stages

¹⁹² Ibid. p. 99.

¹⁹³ Ibid. p. 99.

Parking Deck Expansion	parking deck with an additional 800-1200 new parking spaces.			
Atlanta VA Medical Center Research Facility	The VA is proposing a new research building, pending congressional funding approval.	1670 Clairmont Road	Within Study Area	To be completed 2019, pending funding approval.
Atlanta VA Medical Center Parking	The VA is proposing to construct a new 500 space parking deck.	1670 Clairmont Road	Within Study Area	To be completed Fall 2016/17.
Transportation Improvements				
Clifton Road at CSX Railroad Bridge Replacement and Realignment/Haygood Drive Widening	DeKalb County is proposing to construct a new bridge on Clifton Road over the CSX railroad track, along with the realignment and widening of Clifton Road and Haygood Drive. Haywood Drive widening would also include bicycle lanes, shoulders and a median from Clifton Road to North Decatur Road.	Clifton Road and CSX Rail line. Haywood Drive from Clifton Road to North Decatur Road.	Within Study Area	Unfunded.
Emory Point Clifton Road Improvements	Signal installation and optimization to be completed. Existing bike lane to be striped in the future.	Clifton Road	Within Study Area	2017
North Decatur Road/Clifton Road Intersection	Emory University is proposing to reconfigure the North Decatur Road/Clifton Road intersection by adding a dedicated right-turn lane from Clifton Road onto North Decatur and/or restriping the southbound approach on Clifton Road.	North Decatur Road and Clifton Road	Within Study Area	
SR236 (LaVista Road) at SR42 (Briarcliff Road)	GDOT is proposing to upgrade the intersection at LaVista Road and Briarcliff Road. ARC DK-274, GDOT#753290	Briarcliff Road and LaVista Road	Within Study Area	Unfunded
GDOT Signal Optimizations Study	GDOT Project No.0006999 Project upgrades and in some cases may replace approximately 31 signals in DeKalb County.	Various locations within the Study Area.	Within Study Area	Ongoing
LaVista Road and Biltmore	GDOT proposing two left turn lanes. Road widening would be required on LaVista.		Within Study Area	2015-2016

The following section generally contains a qualitative assessment of potential indirect and cumulative impacts for the Preferred Alternative. The direct impacts of the Preferred Alternative were evaluated to determine if they could result in indirect impacts. The cumulative analysis considers the total impacts of the Preferred Alternative with the other major actions affecting that particular resource. If a resource category had the potential to result in significant indirect and cumulative impacts it was carried forward for further discussion. Table 3.14-2 identifies the potential indirect and cumulative impacts of the Preferred Alternative.

Table 3.14-2: Potential Indirect and Cumulative Impacts

DEIS Resource Section/Subsection	Existing Conditions	Preferred Alternative Direct Impacts	Potential Indirect Impacts	Potential Cumulative Impacts
Socioeconomics	The Study Area exhibits low poverty and unemployment rates. The Study Area has a stable housing stock with higher home values compared with DeKalb County and City of Atlanta as a whole.	The Preferred Alternative would increase the employee population in the Study Area and generate temporary direct construction jobs. The Preferred Alternative would not displace any residences or businesses in the Study Area.	The Preferred Alternative would introduce 1,485 new employees to the Study Area. This represents a small fraction of the total employee population in the Study Area. The Preferred Alternative would not result in secondary displacement of residents or businesses. The additional employees would have a beneficial impact on local businesses.	The Preferred Alternative is unlikely to contribute to significant cumulative socioeconomic impacts. The increase in HHS/CDC employee population in combination with other employment growth within the Study Area could facilitate redevelopment of underutilized commercial areas. Employment growth in the area would have beneficial socioeconomic impacts.
Land Use, Zoning, Public Policy	The Study Area is located within an urban setting with well-established residential and institutional land uses. There is limited undeveloped land. Potential future development is likely to consist of redevelopment of underutilized or aging commercial areas or commercial areas rezoned for mixed-use.	No direct change to land use or zoning. No conflict with existing public policies. The Preferred Alternative would slightly increase the density of existing institutional uses.	The Preferred Alternative would introduce 1,485 new employees to the Study Area. This increase in the employee population is not anticipated to have a significant effect on the residential or commercial real estate market that would result in land uses changes. Preferred Alternative is not anticipated to induce additional development or growth.	The Preferred Alternative is unlikely to contribute to significant cumulative land use impacts. The Preferred Alternative in combination with other actions would increase the density of existing institutional land uses within the Study Area. The increase in employee population in combination with other employee growth within the Study Area could facilitate the redevelopment of underutilized commercial areas. Any redevelopment would occur based on market factors and in accordance with local land use guidelines and zoning regulations.

DEIS Resource Section/Subsection	Existing Conditions	Preferred Alternative Direct Impacts	Potential Indirect Impacts	Potential Cumulative Impacts
Community Services and Facilities	The Study Area falls within the boundaries of DeKalb County and City of Atlanta. Numerous community facilities are present within the Study Area including schools, hospitals and medical facilities.	The Preferred Alternative would not physically displace or alter any community facilities within the Study Area. There are sufficient community services to accommodate additional demand from employee growth.	Project would not induce residential growth that would overburden community facilities or service providers, or alter community character. Adjacent residential neighborhoods would be affected by increased traffic congestion.	The Preferred Alternative would contribute to cumulative traffic impacts within the Study Area. Cumulative traffic impacts could affect access to community facilities and services and could result in increased fire and emergency response times
Transportation	The Study Area roadways and intersections in the vicinity of the Roybal Campus currently operate under congested conditions with relatively high traffic volumes during typical commuter peak hours. Limited public transit options contribute to congestion.	Project would contribute to traffic delays in the Study Area. When considering the projected background growth by the year 2025, in addition to growth from the project and lack of transportation improvements planned for the area, the majority of intersections and roadways serving the Clifton Corridor are anticipated to function at unacceptable levels of service.	Project would not induce growth or development that would indirectly increase traffic or increase demand for public transit.	New vehicle demand associated with the proposed implementation of the Master Plan is anticipated to further aggravate these conditions, contributing to significant cumulative traffic impacts. The Preferred Alternative would contribute to the cumulative demand for public transit. Due to the lack of existing public transportation options, cumulative impacts may result.
Air	DeKalb County is designated as not in attainment for particulate matter (PM _{2.5}) and ozone (O ₃) of the NAAQS. Facility air emissions at the Roybal Campus are currently controlled by a Title V permit.	The Preferred Alternative would result in a minimal increase in air emissions, primarily associated with vehicular emissions. However, the Preferred Alternative would not cause nor contribute to any localized violations nor increase the frequency or severity of any existing violation of the NAAQS.	Project would not induce growth or development that would indirectly increase vehicular or stationary air emissions.	The Preferred Alternative would result in a small increase in air emissions that would contribute to a cumulative increase in pollutant emissions. Improvements in fuel efficiency and automobile technology would reduce future air emissions.
Noise	Existing noise levels in the Study Area are typical of suburban residential neighborhoods.	Increased vehicle traffic would result in a minor increase in the existing ambient noise conditions. The Preferred Alternative would not result in any significant stationary or mobile noise impacts. The noise analysis for direct impacts includes future background traffic growth.	Project would not induce growth or development that would indirectly increase noise levels within the Study Area.	The Preferred Alternative would contribute to cumulative traffic impacts within the Study Area, which may correlate to increased noise levels.

DEIS Resource Section/Subsection	Existing Conditions	Preferred Alternative Direct Impacts	Potential Indirect Impacts	Potential Cumulative Impacts
Cultural Resources	There are no historic resources on the Roybal Campus. The Study Area includes two NRHP properties, four NRHP districts and 6 Georgia Historical Markers.	The Preferred Alternative would not directly impact any cultural resources. HPD correspondence indicated that the proposed undertaking does not have the potential to result in historic resource impacts and no further coordination under Section 106 of the NHPA is required.	The Preferred Alternative would not result in any changes that would alter the context of the historic resources or affect access to the sites. Project would not induce growth or development that would overburden use of the sites.	The Preferred Alternative would contribute to cumulative traffic impacts within the Study Area. Some of the historic districts would be impacted by increased traffic congestion.
Urban Design and Visual Resources	The visual character of the Study Area is urban, with a curvilinear street pattern, a mix of residential and institutional uses with some commercial uses. Areas of visual interest include Emory University and historically designated residential neighborhoods.	The Preferred Alternative would introduce new structures that would be in keeping with the existing height, massing, density and scale of buildings on the Roybal Campus and along Clifton Road. The new laboratory building would not be higher than any existing buildings on campus. Significant direct impacts to urban design and visual resources are not anticipated.	The Preferred Alternative would not induce development that would indirectly alter the visual character of the Study Area.	Construction projects within the Study Area would result in densification of buildings primarily on institutionally owned property. As the Study Area is largely developed any new changes to visual character from the Preferred Alternative and other development is not likely to be significant. Cumulative impacts are not anticipated.
Natural Resources	The majority of the campus is developed. There are no known occurrences of federally/state listed endangered or threatened species, or no natural wildlife habitat on the Roybal Campus.	Impacts to natural resources are not anticipated. BMPs would be implemented in compliance with stormwater regulations.	The Preferred Alternative would not induce population growth or development that would impact natural resources.	Cumulative impacts are not anticipated.
Utilities	Existing utilities which service the site includes, water, steam, natural gas, electric, chilled water and sewer.	The Preferred Alternative would result in an increase in utility demand, however, sufficient capacity exists to accommodate the demand. HHS/CDC would continue its efforts to meet	Project would not induce growth or development that would indirectly increase utility needs. Capacity upgrades to	Adequate capacity exist within the Roybal Campus service area, cumulative impacts are not anticipated.

DEIS Resource Section/Subsection	Existing Conditions	Preferred Alternative Direct Impacts	Potential Indirect Impacts	Potential Cumulative Impacts
		federal and HHS sustainability goals and reduce utility needs.	utilities such as water mains, gas and sewer lines outside the campus would not be required.	
Waste	The Roybal Campus generates solid, infectious and hazardous waste.	The additional employees and related increase in laboratory and office operations would result in a moderate increase in waste generated on campus; however the character of the waste would remain the same. The HHS/CDC is committed to reducing waste generation.	Project would not induce growth or development that would indirectly increase waste generation.	Cumulative impacts are not anticipated.
Greenhouse Gases and Sustainability	Within the Study Area, greenhouse gases are emitted into the atmosphere through natural processes and human activity (fuel consumption; vehicle miles traveled).	The Preferred Alternative would result in an increase in energy consumption. The HHS/CDC has policies in place to reduce energy consumption and GHG. HHS/CDC would continue its efforts to meet federal and HHS sustainability goals and reduce GHG emission campus wide. Improvements in fuel efficiency and automobile technology would reduce future GHG emissions.	Project would not induce growth or development that would indirectly increase greenhouse gases.	The Preferred Alternative would result in a minor contribution to GHG emissions. Improvements in fuel efficiency and automobile technology would reduce future GHG emissions. Cumulative impacts are not anticipated.

Indirect Impacts

Indirect impacts typically result from growth-inducing effects such as changes in land use and population growth.¹⁹⁴ Implementation of the Preferred Alternative would increase the daytime population of the Study Area. The increase of 1,485 new employees to the Study Area represents a small fraction of the total employee population in the Study Area. Based on current neighborhood and campus demographic trends, it is assumed that only a small portion of the future employee population would seek residence within the Study Area. The increase in daytime population is not anticipated to induce residential or commercial development or growth or alter the existing development patterns within the Study Area. Significant adverse indirect impacts as a result of the Preferred Alternative are not anticipated.

Cumulative Impacts

Potential cumulative impacts associated with the Preferred Alternative are primarily related to the increase in traffic volumes resulting from the construction of the new parking deck as well as employee growth. In the future, even without the implementation of the Preferred Alternative, the combination of increased demand resulting from other future development projects and normal background growth anticipated by the build year would contribute to increased delays and heavy traffic volumes. Absent of mitigation measures that would improve capacity or reduce demand during the peak hours, traffic conditions within the Study Area are likely to worsen. New vehicle demand associated with the proposed implementation of the Master Plan is anticipated to further aggravate these conditions, contributing to significant cumulative traffic impacts.

The CEQ does not specifically require substantive mitigation of indirect or cumulative impacts; however, CEQ regulations require consideration and discussion of possible mitigation measures for adverse impacts. Due to the nature of indirect and cumulative impacts, especially traffic impacts, implementing mitigation measures are often beyond the jurisdiction of the Lead Agency. Mitigation of cumulative traffic impacts would require a collaborative approach from local, state and federal agencies.

The existing traffic congestion in DeKalb County has largely been the result of historic development patterns, and the imbalance in the locations of housing and employment centers found throughout the entire region. The decentralized suburban development pattern that characterizes the region has resulted in strained county roadways due to the inability to keep up with the pace of development and the design of the street network. Roadway improvements have not consistently correlated to new development. This has caused residential development that feeds onto small streets that were originally designed as rural routes. The typical suburban design consists of dead end and curvilinear streets that concentrate traffic to single or few exits leading onto roadways that are often over capacity.¹⁹⁵

The development pattern within the Study Area encouraged low-density residential growth and a shift from streetcar line (adjacent to Ponce de Leon Avenue) and regional rail service at Emory Station to the use of private automobiles in the 1960s. Constructed in 1916, Emory Station served as a rail depot for the Seaboard Air Line Railway until passenger rail service ceased in 1969.¹⁹⁶ This discontinuation of the historic passenger rail service within the corridor may have contributed to the prevalence of private

¹⁹⁴ 40 CFR § 1508.8

¹⁹⁵ Ibid. p. 147.

¹⁹⁶ Emory University. *Emory History: The Depot*. <http://emoryhistory.emory.edu/enigmas/depot.htm> (May 29, 2013).

automobile usage within the corridor. When capacity improvements were needed, the typical solution was to widen the travel ways and/or add lanes, which likewise encouraged the use of private automobiles. As a result, there are limited opportunities to further expand the capacity of the existing local roadway infrastructure. The suburban development pattern and limited capacity to expand has contributed to persistent and recurring traffic congestion on local roadways. In 2005, 66 percent of corridor roadways were operating at LOS D or worse during the p.m. peak hour.¹⁹⁷ Similarly, approximately 71 miles of roadway in the Decatur/Emory area forecasted to operate at volumes exceeding capacity by the year 2030 as indicated in the county's Comprehensive Transportation Plan (CTP). Study Area roadways, identified in the CTP, projected to be at or over capacity include Briarcliff Road and portions of Clifton Road. As a result, these roadways would be unable to accommodate future traffic demand. Presently, the automobile is the dominant mode of transportation within the Study Area, serving as the travel mode for the vast majority (approximately 74 percent) of all vehicular trips (67 percent drive alone/ 7 percent car pool).

State, county, local governments and residents have long recognized the importance of addressing the mobility issues within the Clifton Corridor. In the mid-1990s, the environmental review conducted as part of the 1996 Roybal Campus EIS indicated that all intersections feeding into the Clifton Corridor were very congested (circa 1996) and would likely worsen in the future with or without the Proposed Action.¹⁹⁸ The 1996 EIS further alluded to the history of traffic issues within the corridor. The EIS also documented that in late 1991, neighborhood groups entered into a series of meetings with MARTA to investigate transportation alternatives. The groups soon turned their attention to more immediate problems of spill-over traffic congestion, cut-through traffic, and on-street parking within residential areas surrounding the corridor. General traffic and parking observations derived from these meetings are as follows:¹⁹⁹

- Traffic problems on and adjacent to the Clifton Corridor were severe and troublesome to residents and employees;
- There were active, ongoing meetings occurring among MARTA, ARC, major corridor employers and neighborhood groups, and;
- New initiatives were expected to attempt to improve transit access and reduce automobile trips to the corridor.

There have been a number of subsequent attempts by government entities to respond to transportation, development and overall quality of life issues within the Clifton Corridor. Such efforts have included transit studies, planning and public policy initiatives at the regional, county, and local level brought forth by government and interested community partnerships. A number of public policy initiatives such as the DeKalb County Comprehensive Plan (Comprehensive Plan) and Comprehensive Transportation Plan, ARC PLAN 2040, and other efforts have been used in an effort to guide transportation and land use planning within the Clifton Corridor and also to address the interrelationship between these areas.

¹⁹⁷ Clifton Corridor Transit Initiative Clifton Corridor Alternatives Initiation Information Booklet. July 2009. p.2

¹⁹⁸ GSA. *Final Environmental Impact Statement for the Expansion of the Centers for Disease Control and Prevention*. December 1996. p. V-41.

¹⁹⁹ Ibid. p. IV-25.

While some implementation strategies contained in the *Comprehensive Plan* such as the encouragement of Transit Oriented Development (TOD) have been implemented through the rezoning of Emory Point to a Pedestrian Community district, many of the strategies are conceptual in nature with no regulatory mechanism in place to ensure their enforcement or implementation. Additionally, implementation of local and regional policies are challenging to implement as large institutional uses/federal government holdings are not subject to local municipal, county or state requirements and/or oversight.

As stated in its *Comprehensive Plan*, DeKalb County lacks a formal and consistent coordination mechanism for land use planning with adjacent local governments. Major regional development projects are formally coordinated through the Georgia Department of Community Affairs and the Developments of Regional Impact (DRI) process. This process requires development projects of a certain size threshold to undergo a review of transportation, infrastructure and land use impacts by appropriate state and regional agencies as well as local municipalities. Since the DRI review process is limited to major development projects, it does not provide a consistent coordination process inclusive of smaller land use actions or developments.²⁰⁰ On balance, while some land use coordination occurs through the Atlanta Regional Commission and planning studies that cross jurisdictional lines, these activities do not provide a consistent planning vision or a formalized coordination process.²⁰¹

However, at the local level, ARC and DeKalb County have successfully collaborated in cooperation with municipalities and community entities to implement several LCI plans within the Study Area. These include the North Druid Hills LCI, Emory Village Revitalization Plan, and City of Decatur LCI. The Emory Village Revitalization Plan concentrates on helping this neighborhood adjust to the pressures resulting from the growth of Emory University and Druid Hills. Alliance to Improve Emory Village has used public improvement funds from both DeKalb County and ARC to improve pedestrian and vehicular flow through the addition of streetscape amenities and traffic improvements. The Emory Village neighborhood was also rezoned in 2007 to allow multi-story, mixed-use development. Decatur's LCI and the North Druid Hills LCI focus on integrating land use and transportation to plan for residential and commercial development within their jurisdictions. These LCIs support increasing density through the development of the planned mixed-use Toco Hill and Mason Mill nodes.

Similarly, ARC has acknowledged the importance of fostering collaboration and building consensus by bringing local governments, private sector, the state and non-governmental entities to address crucial transportation issues confronting the region in its *PLAN 2040 Regional Transportation Plan (RTP)*. This plan along with the *Comprehensive Transportation Plan* recognizes the current fiscal environment and declining federal and state funding sources. Accordingly, both of these plans encourage DeKalb County to seek creative, local ways to finance needed transportation infrastructure projects. The RTP provides future funding alternatives as possible sources of revenue for funding capital, maintenance, and operating costs of existing and future transportation infrastructure projects required to support the needs of the region.²⁰²

In addition, the ability for employees to get to work via the automobile is not sustainable in the long-term as corridor roadways are at or approaching capacity and the area is acutely underserved by transportation facilities and services. Approximately 71 miles of roadway in the Decatur/Emory area

²⁰⁰ Emory University. *Emory History: The Depot*. <http://emoryhistory.emory.edu/enigmas/depot.htm> (May 29, 2013).p. 150.

²⁰¹ DeKalb County Department of Planning and Development Strategic Planning Division DeKalb County. *DeKalb County Comprehensive Plan 2005-2025. Executive Summary*. p.22.

²⁰² Atlanta Regional Commission. *PLAN 2040 RTP – Chapter 5: Financial Plan and Future Funding Options*. p. 5-17.

forecasted to operate at volumes exceeding capacity by the year 2030 as indicated in the county's CTP. Two major Study Area roadways, Briarcliff Road and portions of Clifton Road are projected to be at or over capacity as per the CTP. As a result, these roadways would be unable to accommodate future traffic demand. In regards to alternative modes of transportation, DeKalb County has called for the expanded use and improvement of the current MARTA system including express bus service routes, additional park and ride lots, and cross-town links.²⁰³ Additionally, recommendations contained in the CTP included new MARTA bus routes to serve Clairmont Road and other corridor roadways. However, as of April 2013, MARTA bus service has been modified or reduced within the corridor. The county has also adopted code requirements requiring sidewalks in all new developments in order to facilitate pedestrian access.

While there has been some success introducing smaller scale projects to the Clifton Corridor, the implementation of major projects that would help to create transportation choices or help to alleviate congestion along the Clifton Corridor has not occurred to date. Previous studies related to improving mobility, transit service and providing non-automobile oriented transportation within the Clifton Corridor have included the Clifton Corridor Alternatives Analysis, the selection of a Light Rail LPA, precursor CCTMA corridor studies (2005; 2008) and the Athens to Atlanta Commuter Rail. The Clifton Corridor LPA is currently in Phase I of a two phased environmental review process. According to MARTA's *Environmental Review/Environmental Impact Statement Fact Sheet–Spring 2013* Phase II of the environmental review process is tentatively scheduled to begin in July 2013 with completion anticipated in 2015. However, the fact sheet indicates that these schedule dates are to be determined.²⁰⁴ The Athens to Atlanta Commuter Rail has been identified in DeKalb County's CTP as a long range project for the 2021 to 2030 time horizon.²⁰⁵ In order to identify transportation needs, the CTP segmented DeKalb County for analysis and comparison purposes. The CTP noted that the Decatur/Emory area, which encompasses approximately 15.3 percent of the Central Quadrant, would be the most congested sub quadrant within the county by 2030.²⁰⁶

While state, county, and local governments have long recognized the importance of addressing the mobility issues within the Clifton Corridor, these efforts have not gained traction or achieved sufficient public support or funding. This lack of support for comprehensive transportation improvement projects is evidenced by the rejection of the T-SPLOST referendum in July 2012 which would have provided funding to implement regional projects of significance such as the Clifton Corridor light rail transit initiative and other projects designed to help alleviate the corridor wide transportation issues that have been exacerbated through unchecked growth and development.

As noted throughout, the importance of the Clifton Corridor in terms of workforce and economic development is paramount on both a local, regional and national scale. While the Clifton Corridor is a major regional activity center, there is no direct access to commuter rail or the interstate highway system. As a result recurring traffic congestion is persistent on local roadways. Without a larger commitment to address congestion issues within the area, cumulative traffic impacts related to past, current, and future growth may have crippling effects on the Clifton Corridor. Controls for reducing

²⁰³ DeKalb County Strategic Planning Division Department of Planning and Development. *DeKalb County Comprehensive Plan 2005-2025: Community Assessment*. May 2007. p. 144.

²⁰⁴ MARTA. Clifton Corridor Transit Initiative. *Environmental Review Fact Sheet. Spring 2013*.

http://www.itsmarta.com/uploadedFiles/About_MARTA/Planning/Clifton_Corr/Fact%20Sheet%201%20Clifton%20Corridor%20EIS_PD%20Phase%201%20-%20Spring%202013.pdf

²⁰⁵ DeKalb County Comprehensive Transportation Plan Final Report. May 2007. p. 3-72.

²⁰⁶ Ibid. p. 4-9.

congestion within the Clifton Corridor are beyond the jurisdiction of a single particular project sponsor or Lead Agency. As cumulative traffic impacts result from the combined action of private and public entities, mitigation would require a collaborative approach. There is limited opportunity to increase roadway capacity within the Study Area, however some readily implementable infrastructure improvements could be undertaken to increase roadway capacity such as signal optimization, lane restriping and widening. Further study could be undertaken to investigate the feasibility of installing traffic signals at recommended locations. A detailed discussion of capacity improvements is provided in Section 3.4. Transportation.

In order to ease traffic congestion within the corridor, the implementation of comprehensive, large-scale transportation infrastructure projects that would reduce dependency on the automobile would be required. This includes improvements to mass transit (rail, bus) as well as implementation or enhancement of TDM strategies and policy initiatives by employers within the Clifton Corridor. Transportation Demand Management (TDM) is typically employed to increase overall transportation system efficiency by encouraging a shift from single-occupancy vehicle travel to non-single occupancy travel modes, or shifting automobile trips outside of peak commuting periods. TDM looks to decrease automobile trips and associated vehicle miles traveled (VMT) by providing incentives and programming to assist individuals to modify their travel behavior.²⁰⁷ TDM strategies can be implemented via governmental agencies, employers or local partnerships. Policy initiatives that could help alleviate traffic conditions in the Study Area may include charging for parking, parking cash-out, marketing the use of park and ride lots, peak period transit only lanes, and connections to existing mass transit. Accordingly, local, regional and state governments must be supportive of these efforts and take a collaborative approach towards safeguarding the viability of the Clifton Corridor.

²⁰⁷ Seattle Urban Mobility Plan. *Best Practices Transportation Demand Management (TDM)*. January 2008. p. 7A-1.

3.15 Unavoidable Adverse Environmental Impacts

Implementation of the Preferred Alternative would result in unavoidable adverse environmental impacts associated with the construction phase, as well as the operational phase, when the Preferred Alternative has been fully implemented on the Roybal Campus.

Construction Phase

Potential unavoidable adverse environmental impacts that would result during the construction phase would involve the disruption and exposure of soils resulting from excavation, grading, and site restoration activities. These activities would increase the potential for sedimentation and erosion. However, with the use of BMPs for the duration of construction, as HHS/CDC has done during major construction activity at the Roybal Campus in the past, impacts associated with soil erosion and sedimentation would be minimal. The use of heavy construction equipment would temporarily increase the consumption of petroleum hydrocarbon fuels and the subsequent release of air pollutants, including carbon monoxide, particulate matter, and carbon dioxide. Additionally, the construction phase would result in potential short-term and localized increases in dust, as well as temporary construction-related noise, truck traffic and other campus disruptions.

The potential unavoidable adverse environmental impacts associated with the construction phase would be temporary in nature and limited in scope. As such, it is believed that the benefits of the Preferred Alternative outweigh the unavoidable short-term construction impacts.

Operational Phase

Potential unavoidable adverse environmental impacts that would occur at the completion of construction would result in increased traffic levels along roadways coming to and from the Roybal Campus. The increase in traffic would increase the consumption of petroleum hydrocarbon fuels and the subsequent release of air pollutants, including carbon monoxide, particulate matter and carbon. The use of resources required to support the new laboratory building would result in the increased consumption of energy, potable water and natural gas. The potential unavoidable adverse environmental impacts associated with the operational phase are not anticipated to be significant.

Executive Order 13514 Federal Leadership in Environmental, Energy, and Economic Performance, the *Energy Independence & Security Act of 2007* and the *Energy Policy Act of 2005* are all mandates that require federal agencies to support the conservation of natural resources. In response to these federal mandates, the HHS/CDC developed a Sustainability Policy including goals, guidelines and procedural changes to preserve and protect natural resources²⁰⁸. Specific commitments for sustainability include a 32 percent reduction in electricity consumption, a 26 percent reduction in potable water consumption by the year 2020, as well as a 50 percent recycling and waste diversion by 2015. The Clean Air Program, which is part of the Sustainability Program, is responsible for the implementation of programs, infrastructure and policies that encourage walking, bicycling, carpooling, vanpooling, mass transit use, teleworking and compressed work schedules. Refer to Section 3.12. Greenhouse Gases and Sustainability of this document for additional information regarding these federal mandates.

²⁰⁸ CDC. 2011 CDC Annual Sustainability Report.

3.16 Local Short Term Use and Long Term Productivity

Construction of the Preferred Alternative would result in short-term construction-related impacts associated with poor traffic circulation, increased air emissions from construction vehicles, an increase in ambient noise levels, dust exposure, disturbance of wildlife and increased stormwater runoff. These impacts would be limited and would occur only during construction, and would not alter the long-term productivity of the natural environment.

The Proposed Action Alternative would assist in the long-term productivity of the HHS/CDC's mission to protect health and promote the quality of life through the prevention and control of disease, injury and disability. HHS/CDC serves as the national focus for developing and applying disease prevention and control, environmental health, and health promotion and education activities designed to improve the health of this nation. In addition to the health benefits afforded to all US citizens, campus improvements would support additional research resulting from grants and research programs and would consequently result in long-term economic benefits.

These long-term beneficial effects of the Preferred Alternative would outweigh the short-term impacts to the environment resulting primarily from project construction.

Short-term impacts that would occur during the construction period include traffic delays, increases in noise and air pollution, and the loss of vegetation and soil exposure. All construction related impacts would be temporary and proper controls would be implemented to prevent these impacts from having a long-term effect on the environment.

The short-term construction related impacts associated with this project would promote the long-term productivity of the HHS/CDC, which is dedicated to protecting health and promoting the quality of life through the prevention and control of disease, injury and disability. HHS/CDC serves as the national focus for developing and applying disease prevention and control, environmental health, and health promotion and education activities designed to improve the health of this nation. In addition to the health benefits afforded to all US citizens, campus improvements would support additional research resulting from grants and research programs and would consequently result in long-term economic benefits.

3.17 Irreversible and Irretrievable Commitments of Resources

Irreversible commitments of resources result in either the direct or indirect consumption of natural resources, where the use of such resources could not be restored or returned to their original condition. Construction of the proposed facilities would result in an irretrievable and irreversible commitment of natural resources through direct consumption of fossil fuels (primarily gas, diesel, and motor oil) and the use of construction equipment, which would require connections to an existing power source. The energy consumed during construction is short-term and would not result in the long-term consumption of fossil fuels or other non-renewable energy resources. The project would also not impact existing electrical or natural gas service providers.

The use of the nonrenewable natural resources is expected to account for a minimal portion of the region's natural resources and would have no impact on service providers or consumers in the region. Additional information regarding impacts to nonrenewable resources resulting from the Preferred Alternative can be found in Section 3.10. Utilities.

As previously noted, the HHS/CDC is committed to reducing the consumption of natural resources in the future with the development of a Sustainability Policy. Specific commitments for sustainability include a 32 percent reduction in electricity consumption and a 26 percent reduction in potable water consumption by the year 2020. The Clean Air Program, which is part of HHS/CDC's Sustainability Policy, is responsible for the implementation of programs, infrastructure and policies to encourage walking, bicycling, carpooling, vanpooling, mass transit use, teleworking and compressed work schedules, which would reduce natural resource consumption. Refer to Section 3.12. Greenhouse Gases and Sustainability of this document for additional information regarding these federal mandates.

4 Summary of Impacts and Mitigation

The following table, Table 4-1, provides a comparison of impacts associated with the No Action Alternative and the Preferred Alternative. As described in Section 2. Alternatives, the No Action Alternative serves as a baseline, which allows decision makers to compare the environmental consequences of continuing to operate under current conditions against the consequences of the Preferred Alternative. The Preferred Alternative encompasses the proposed Master Plan improvements that would be implemented on the Roybal Campus by 2025. A detailed existing conditions assessment and impact evaluation is presented in Section 3. Affected Environment and Environmental Consequences of this document.

Table 4-1: Summary of Impacts and Mitigation

DEIS Resource Section/Subsection	No Action Alternative	Preferred Alternative		
		No Impact ○	Minimal Impact ◐	Significant Impacts ●
Socioeconomics	The No Action Alternative would not displace any residences or businesses in the Study Area. Staffing at the Roybal Campus is anticipated to increase by an estimated 865 employees by 2025. The increased employee population would generate additional spending at the local level.	The Preferred Alternative would not displace any residences or businesses in the Study Area. Staffing at the Roybal Campus is anticipated to increase by an estimated 1,485 employees by 2025. The increased employee population would generate additional spending at the local level. On a regional level, the short-term increase in employment associated with construction and construction-related activity would be expected to filter through the local economy, generating consumer and business spending. Significant adverse socioeconomic impacts are not anticipated.		
Land Use, Zoning & Public Policy	Land uses on the Roybal Campus would remain the same. The employee population increase is not anticipated to induce changes to land use or zoning in the Study Area. No zoning changes are expected in the vicinity of the Study Area. Development trends are consistent with local and regional public policy initiatives, including the county's Comprehensive Plan.	The Preferred Alternative would not directly change land use or zoning and would not conflict with existing public policies. The Preferred Alternative would slightly increase the density of existing institutional uses. Significant adverse land use or zoning impacts are not anticipated. The Preferred Alternative is not anticipated to result in a significant adverse impact related to public policy.		
Community Services and Facilities/Cohesion	There would be no direct effect on community resources or community cohesion within the Study Area. Existing open space on campus would support employee growth. There are sufficient community services to	The implementation of the Preferred Alternative would not physically displace or alter any community facilities within the Study Area. Existing open space on campus would support employee growth. There are sufficient community services to accommodate the additional demands resulting from employee growth. Based on current neighborhood and campus demographic trends, it is assumed that only a small portion of the future		

DEIS Resource Section/Subsection	No Action Alternative	Preferred Alternative	
		No Impact ○	Minimal Impact ◐ Significant Impacts ●
	<p>accommodate the additional demands resulting from employee growth.</p> <p>Study Area open space resources and services would not be overburdened by the No Action Alternative.</p>	<p>employee population would seek residence within the Study Area. This additional population would have a negligible impact on the community facilities and services.</p> <p>The Preferred Alternative would contribute to increased traffic within the Study Area which may affect fire and emergency response times.</p>	
Transportation	<p>Congestion would continue to increase in the future without the Preferred Alternative in place due to the background growth contributed by major employment centers and institutions located within the Clifton Corridor. These destinations, as world-renowned educational, medical and research facilities also function as destinations within the Clifton Corridor which attract travelers from beyond the Clifton Corridor.</p>	<p>The Preferred Alternative is anticipated to generate traffic that would result in significant impacts to intersections in the traffic Study Area. When considering the projected background growth by the year 2025, in addition to growth from the project, and the lack of transportation improvements planned for the area, the majority of intersections and roadways serving the Clifton Corridor are anticipated to function at unacceptable levels of service with long vehicle delays and congestion.</p> <p>New vehicle trips generated as a result of the implementation of the Master Plan are anticipated to further exacerbate poor traffic conditions.</p>	●
Air Quality	<p>DeKalb County is designated as not in attainment for particulate matter (PM_{2.5}) and ozone (O₃) of the NAAQS. The No Action Alternative would not cause nor contribute to any localized violations nor increase the frequency or severity of any existing NAAQS violations. Facility air emissions at the Roybal Campus are currently controlled by a Title V permit. No changes in emissions that would affect</p>	<p>DeKalb County is designated as not in attainment for particulate matter (PM_{2.5}) and ozone (O₃) of the NAAQS. The Preferred Alternative would result in a minimal increase in emissions; it would not cause nor contribute to any localized violations nor increase the frequency or severity of any existing NAAQS violations. Therefore, the Preferred Alternative would not result in significant adverse air quality impacts.</p> <p>The Preferred Alternative proposes to construct a new laboratory building and parking deck. Neither of these additions was determined to require new boiler capacity or back-up power systems, as the existing Roybal Campus energy budget would sufficiently support both new facilities within Title V permit</p>	◐

DEIS Resource Section/Subsection	No Action Alternative	Preferred Alternative	
		No Impact ○	Minimal Impact ◐ Significant Impacts ●
	existing permit conditions are expected under the No Action Alternative.	operational parameters. No changes in emissions that would affect the existing permit conditions are expected.	
Noise	Background traffic volumes would increase to reflect expected growth in overall travel through and within the area, major real-estate developments, institutional expansions, and roadway physical and/or operational system changes scheduled to be occupied or implemented by 2025.	<p>The proposed increase in vehicle trips as a result of the Master Plan would not result in any increase to sound levels above the impact thresholds; and would therefore have no impact on adjacent noise-sensitive receivers.</p> <p>Construction activity would result in temporary noise impacts and would cease once construction is completed. Significant adverse noise-related impacts are not anticipated.</p>	
Cultural Resources	Historic resources within the Study Area would remain similar to existing conditions. No disturbance or alterations to existing cultural or historic resources within the Study Area would occur.	<p>The improvements associated with the Master Plan would be limited to the self-contained Roybal Campus. The Preferred Alternative would not result in impacts to cultural resources within the Study Area or beyond. The HHS/CDC has determined that the implementation of the Roybal Campus 2025 Master does not have the potential to cause affects to historic resources, therefore no further coordination under Section 106 of the NHPA is anticipated. HPD correspondence indicated that the proposed undertaking does not have the potential to result in historic resource impacts and concurred with the HHS/CDC that no further coordination under Section 106 of the NHPA is required. Significant adverse impacts to cultural resources are not anticipated.</p>	
Urban Design and Visual Resources	No new construction, major renovations adding significant population or infrastructure improvements would occur on campus. There would be no physical changes to the Roybal Campus. As such, the No Action Alternative would not result in significant adverse impacts to urban design features or the visual	<p>The Preferred Alternative would introduce new structures that would be in keeping with the existing height, massing, density and scale of buildings on the Roybal Campus and along Clifton Road. The new laboratory building would not be higher than any existing buildings on campus. Therefore, the Preferred Alternative would not result in significant impacts to urban design features and visual resources.</p> <p>Significant adverse impacts to urban design and visual resources are not anticipated.</p>	

DEIS Resource Section/Subsection	No Action Alternative	Preferred Alternative	
		No Impact ○	Minimal Impact ◐ Significant Impacts ●
	character of the area.		
Natural Resources (Geology, soils, topography, water resources, water quality, vegetation, floodplains, wildlife and protected species)	The No Action Alternative would not result in significant impacts to campus geology, soils, topography, vegetation, water resources, protected species, or floodplains.	The Preferred Alternative would not result in significant impacts to campus geology, soils, topography or vegetation on-site, as all construction would occur on previously disturbed areas. BMPs would be implemented in compliance with stormwater regulations and would minimize impacts to stormwater during and post construction. Floodplains and protected species are not present on-site, and therefore significant flood-related impacts and impacts to protected species would not occur as a result of the Preferred Alternative. Significant adverse impacts to natural resources are not anticipated.	◐
Utilities	The projected employment increase of 865 individuals would result in a minimal increase in electricity, domestic water, natural gas consumption and the amount of sewage generated on campus, as all employees would be accommodated within the existing office, laboratory and support spaces on campus. The No Action Alternative would minimally increase demands on the heating or cooling systems and capacity improvements would not be required. Under the No Action Alternative, impervious surfaces would not be constructed on campus and consequently additional stormwater runoff would not be generated. The campus would continue to pursue	The Preferred Alternative would result in an increase in electricity, domestic water, natural gas consumption and sewage generation on campus, as well as increase the demand for steam and chilled water. However, the Preferred Alternative would not result in significant adverse impacts to existing utility service providers, the HHS/CDC steam or chilled water systems, or the storm sewer system. Additional stormwater runoff would not be generated by the Preferred Alternative and additional storage capacity would not be required. BMPs consisting of underground structural water quality devices would be implemented in compliance with stormwater regulations and would minimize impacts to stormwater during and post construction. A NPDES General Permit for Construction would be required.	◐

DEIS Resource Section/Subsection	No Action Alternative	Preferred Alternative	
		No Impact ○ Minimal Impact ◐ Significant Impacts ●	
	projects to comply with more restrictive spill protection and NPDES regulations.		
Waste	The character of the waste would remain the same, however the amount of waste generated on site would increase slightly due to the additional employees on campus. Waste would continue to be handled in accordance with HHS/CDC policies as well as applicable state and federal regulations. Waste would continue to be transported off-site by contracted waste haulers.	The additional employees and related increase in laboratory and office operations would result in a moderate increase in waste generated on campus. However, the character of the waste would remain the same. A new laboratory would moderately increase the amount of research activity occurring on campus and generate additional biomedical and hazardous waste. Construction of the new laboratory and building renovations would temporarily increase the amount of construction debris. HHS/CDC would continue to dispose of waste in accordance with HHS/CDC policies and applicable local, state, and federal regulations. Significant impacts related to waste generation are not anticipated.	◐
Greenhouse Gases and Sustainability	The HHS/CDC is moving towards meeting or exceeding the targets associated with federal sustainability mandates. The HHS/CDC would continue to institute sustainability practices and programming in order to meet or surpass these federally mandated sustainability thresholds.	The Preferred Alternative would not result in major emissions of GHG. According to CEQ if a proposed action would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of CO2 equivalent (mtCO2e) on an annual basis, agencies should consider this an indicator that a detailed assessment may be meaningful to decision makers and the public. GHG emissions related to vehicle miles travelled were estimated at 7,929 tons of CO2 for the Preferred Alternative. The GHG emissions falls well under 25,000 mtCO2e. As a result, the Preferred Alternative is not anticipated to cause significant adverse greenhouse gas generation or climate change impacts. The HHS/CDC would continue to comply with or work towards compliance of all federal regulations pertaining to sustainability. The Preferred Alternative would not result in significant adverse impacts associated with greenhouse gases.	◐

Mitigation Measures for the Preferred Alternative

Pursuant to NEPA (40 CFR § 1502.14(f)), an EIS must include appropriate mitigation measures not already included in the proposed action or alternatives. According to 40 CFR § 1508.20, mitigation includes:

- Avoiding the impact altogether by not taking a certain action or parts of an action;
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and,
- Compensating for the impact by replacing or providing substitute resources or environments.

According to the impact assessment conducted in Section 3. Affected Environment and Environmental Consequences of this document, transportation is the only resource area where a significant adverse impact has been identified. The Preferred Alternative would contribute to direct and cumulative traffic impacts. As the traffic impacts result from the combined action of numerous entities, mitigation would require a collaborative approach from local, state and federal agencies. Mitigation measures to minimize traffic impacts associated with the Preferred Alternative are described below. Mitigation measures identified include both those that can be implemented by the HHS/CDC as well as suggested measures that are beyond the jurisdiction of the HHS/CDC and would have to be carried by other private and public entities. The HHS/CDC does not have authority to spend appropriated money on non-Federal property without specific legislation; the HHS/CDC would work with federal, state and local government to determine the feasibility and funding for these mitigation measures.

Traffic Mitigation

The Preferred Alternative is anticipated to generate traffic that would result in significant impacts to intersections in the traffic Study Area. When considering the projected background growth by the year 2025, and lack of transportation improvements planned for the area, the majority of Study Area intersections are expected to function at unacceptable levels of service with long vehicle delays and congestion.

New vehicle trips generated as a result of the Preferred Alternative would further aggravate traffic conditions. Traffic mitigation proposed as part of this assessment is limited to cost-effective, readily implementable improvements. Proposed mitigation measures include:

- Signalization;
- Signal Optimization/Retiming;
- Lane Restriping; and,
- Widening (only approaches that may have sufficient right-of-way)

All traffic Study Area intersections would require signal optimization. New traffic signals are recommended for the intersections of Briarcliff Road and Shepards Lane and at the Houston Mill Road HHS/CDC Entrance. Full signal warrant studies should be conducted to verify the feasibility of this recommendation. In addition, it is recommended that intersection improvements are made at the locations referenced in Table 4-2 below:

Table 4-2: Proposed Intersection Improvements

Intersection	Improvements	Responsible Agency
Clifton Road/Briarcliff Road	An additional left turn lane on the southbound Briarcliff Road approach is recommended. The additional lane would require roadway widening.	DeKalb County/GDOT
Clifton Road/Old Briarcliff Road	A left turn lane on the westbound approach of Clifton Road is recommended. The additional lane would require roadway widening.	DeKalb County/GDOT
Clifton Road/HHS/CDC Main Entrance	A 2nd left turn is recommended on the Clifton Road eastbound approach. The northbound approach at the HHS/CDC Main Entrance should be restriped to allow for two left turn lanes and one shared thru-right lane. Both recommendations would be limited to restriping and would not require roadway widening. In addition, the signal phasing should be modified to a northbound/southbound split-phase configuration.	HHS/CDC/DeKalb County/GDOT
Houston Mill Road/ HHS/CDC Entrance	Install new traffic signal.	HHS/CDC/DeKalb County/GDOT
Briarcliff Road and Shepards Lane	Install new traffic signal.	DeKalb County/GDOT
North Decatur Road/Clifton Road	A short right turn lane on the northbound approach of Clifton Road is recommended. Two new receiving lanes are recommended on Southbound Clifton Road. While these improvements would require roadway widening, there appears to be sufficient right-of-way (ROW) available. In addition, the Clifton Road southbound right-turn lane should be restriped to a shared thru-right lane.	DeKalb County/GDOT

While these improvements would not solve the Study Area's traffic congestion issues, they would help to improve traffic efficiency and bring conditions similar to operations under the No Action Alternative. Further analysis of the proposed mitigation measures is required to assess the feasibility and/or viability of these improvements, and would require coordination with various local agencies including GDOT and DeKalb County.

In addition to roadway specific mitigation measures, alternative mitigation strategies, such as Transportation Demand Management (TDM) and policy initiatives to reduce traffic congestion are noted below. The discussion focuses on the applicability of alternative mitigation strategies at the Roybal Campus, however these measures could also be implemented by other institutions and employers

within the Study Area in an effort to reduce traffic congestion. A detailed discussion of these mitigation strategies is provided in Section 3.4. Transportation.

Transportation Demand Management

Transportation Demand Management (TDM) is typically employed to increase overall transportation system efficiency by encouraging a shift from single-occupancy vehicle travel to non-single occupancy travel modes, or shifting automobile trips outside of peak commuting periods. TDM looks to decrease automobile trips and associated vehicle miles traveled (VMT) by providing incentives and programming to assist individuals to modify their travel behavior.²⁰⁹ TDM strategies can be implemented via governmental agencies, employers or local partnerships. The HHS/CDC is currently engaged in or has previously attempted a variety of TDM strategies. The HHS/CDC continues to examine ways to enhance or improve upon existing TDM programs. Further integration and/or implementation of TDM strategies which could further contribute to the reduction of vehicle congestion and improvement of traffic conditions within the transportation Study Area include:

Employee-Based Transportation Programs designed to reduce the use of single-occupancy motor vehicles for commuter travel. These include telecommuting, the use of internet portal, videoconferencing, and web-based meetings to aid in a reduction of work-related travel. The use of a flexible work schedule or stagger shifts offers employees an opportunity to compress their work week into fewer days per week and travel to the campus during off-peak commuting hours.

Carpooling/Vanpooling. The HHS/CDC offers preferred carpool and vanpool parking for HHS/CDC employees. The HHS/CDC also participates in rideshare matching for carpools and vanpools through ARC in the Atlanta region as well as other MPOs and municipalities across the nation. The provision of free vanpool or carpool vehicles would eliminate the need for employees to bring a private car to work. This would function as another means to potentially increase participation in the carpool/vanpool program. Free taxi ride vouchers for late night trips or trips outside of normal mass transit hours might be another incentive for employees.

Bicycling and Pedestrian Activity. The HHS/CDC offers secure campus parking for bicycles. Pedestrian pathways are located throughout the campus. Shower and locker facilities are also available to staff who wish to walk or cycle to work. These existing facilities and future associated enhancements could make these non-automobile options more attractive.

Campus Amenities. The provision of a garden market, on-site day care facilities, fitness center and food services are amenities that mirror local commercial convenience uses found within the Clifton Corridor. The presence of these on-campus uses may help to reduce off-site trips into the community.

Institute Additional Clean Commute Days. HHS/CDC has conducted "Try-It-Days" over the last three years (FY 2010 - 2012) at each of their metro Atlanta facilities. The implementation of several clean commute days throughout the calendar year would help to reinforce the sustainable culture of the HHS/CDC.

²⁰⁹ Seattle Urban Mobility Plan. *Best Practices Transportation Demand Management (TDM)*. January 2008. p. 7A-1.

Policy

Policy initiatives that could help alleviate traffic conditions at the Roybal Campus and its surroundings, if implemented, include the following:

Parking Management/Charging for Campus Parking. On-site parking at the Roybal Campus is currently free. A free parking supply at a destination can be a crucial factor in the deciding whether to drive a single-occupancy vehicle to work or take a different mode of transportation such as a bus, bicycle or vanpool. Free parking tends to lead to overuse as well as all-day parking. The installation of electronic parking guidance system to direct motorists from campus entrances to available parking locations could help to reduce idling, associated fuel consumption, and generally make campus parking operations slightly more efficient. Shifting to a pay to park scenario, in combination with the sustainable transit initiatives currently implemented at the HHS/CDC, may help to reduce single occupancy vehicles traveling to the Roybal Campus.

Parking Cash-Out. This concept would coincide with a pay to park scenario on the HHS/CDC campus. The HHS/CDC would charge employees to park on campus while providing campus personnel with a monetary increase to offset the cost to park. The parking cash-out would enable employees to use these funds for on-site parking or if they decided to use an alternate mode of transportation they would be able to take home the monetary difference.

Marketing the Use of Park and Ride. The use of park and ride lots would help to reduce parking demand in corridor as well as the automobiles traveling through area neighborhoods to corridor destinations.

Peak-Period Transit Priority Lanes. The potential for a “Transit-Only” lane exclusively during peak commuting should be explored. These lanes would revert back to standard traffic lanes for cars during non-peak commuting hours.

Transit Reimbursement/Commuter Rewards Program. Currently, the HHS/CDC participates in a public transportation subsidy program known as Fare Share. An additional subsidy provided to HHS/CDC personnel (i.e., prize, monetary rewards, free or low-cost MARTA Breeze cards/transit passes) may incentivize additional employees to use clean commuter modes of transit (i.e., vanpool, carpool, mass transit, cycling, walking).

Connections to Existing Mass Transit. This concept would involve the utilization of a carpool/vanpool fleet to connect the Roybal Campus with existing MARTA bus service stops within the Study Area as well as MARTA rail station beyond the Study Area system.

Cliff Shuttle Service Funding. Cliff shuttle service to major corridor destinations is currently available to Emory students, staff, and the general public. Emory representatives have indicated that Cliff is approaching its ridership capacity. In the event that ridership increases in the future, Emory may revise this policy relative to public access to the Cliff service. If the HHS/CDC were to provide additional funding to the Cliff, it would enable this crucial corridor transportation system to continue to provide services to HHS/CDC employees and the public.

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Lindbergh La Vista Corridor Coalition
Mr. Tom Woodward
1403 LaVista Road NE
Atlanta, Georgia 30324

Zonolite Road Business District
info@zonoliteroad.com

Virginia Highlands Civic Association
Mr. Jack White
President
P.O. Box 8041 Station F
Atlanta, Georgia 31106

Briarcliff Woods Civic Association (outside study area)
Mr. Jonathon Wells
President
P.O. Box 98358

Atlanta, Georgia 30359

Briarwood Hills Civic Association (outside study area)
Mary Leight
Acting President

Woodland Hills
Mr. Mike McLead
PO Box 13124
Atlanta, GA 30324

Ms. Emily Meador
Kimley-Horn and Associates
529 Ponce de Leon Ave NE
Atlanta GA 30308

John Wuichet
Centers for Disease Control and Prevention
uwl2@cdc.gov

Interested Parties – Elected Officials

City of Atlanta
Mayor Kasim Reed
55 Trinity Avenue, Suite 2500
Atlanta, Georgia 30303

City of Decatur
Mayor Jim Baskett
P.O. Box 220, Decatur, Georgia 30031
Decatur, Georgia 30031

DeKalb County Board of Commissioners
Ms. Barbara Sanders
Clerk to the CEO and BOC
1300 Commerce Drive
Decatur, Georgia 30030

DeKalb County Commissioner, District 2
Commissioner Jeff Rader
Manuel J. Maloof Center, 1300 Commerce Drive, 5th Floor
Decatur, Georgia 30030

Georgia District 42
Senator Jason Carter
P.O. Box 573
Decatur, Georgia 30031

US House Representative, District 5
Congressman John Lewis
The Equitable Building, 100 Peachtree Street NW, #1920
Atlanta, Georgia 30303

US Senate
Senator Saxby Chambliss
100 Galleria Parkway, Suite 1340
Atlanta, Georgia 30339

US Senate
Senator Johnny Isakson
3625 Cumberland Blvd, Suite 970
Atlanta, Georgia 30339

US House Representative, District 4
Congressman Hank Johnson
5700 Hillondale Drive, Suite 120
Lithonia, Georgia 30058

Interested Parties – Utility Providers

DeKalb County Department of Watershed Management
Mr. Charles L. Lambert
Deputy Director
1580 Roadhaven Drive
Stone Mountain, Georgia 30083

Georgia Power - Electric
Mr. Craig Barrs
EVP External Affairs
241 Ralph McGill Boulevard
Atlanta, Georgia 30308

Atlanta Gas Light- Gas
Mr. Jim Kibler
VP External Affairs and Public Policy
10 Peachtree Place
Atlanta, Georgia 30309

AT+T, Local Communications
Sylvia Russell At&T Georgia President
675 W. Peachstreet St, NW, Suite 4500
Atlanta, Georgia 30308

Interested Parties – Local Emergency Providers

DeKalb County Sheriff
Sheriff Thomas Brown
4415 Memorial Drive
Decatur, Georgia 30032

Decatur Police Department
Chief Mike Booker
250 E. Ponce De Leon Ave, Suite T-130
Decatur, Georgia 30030

Decatur Fire Department
Chief Toni Washington
PO Box 220
Decatur, Georgia 30031

DeKalb County Police
Chief Cedric L. Alexander
1960 West Exchange Place
Tucker, Georgia 30084

Interested Parties – Residents

Morsberger Revitalization
Mr. Emory Morsberger
1485 Chinook Court
Lilburn, GA 30047

7 Acronyms

ACHP	Advisory Council on Historic Preservation
ACM	Asbestos Containing Materials
ACOE	Army Corps of Engineers
AGL	Atlanta Gaslight
APE	Area of Potential Effect
ARC	Atlanta Regional Commission
AST	Above-ground Storage Tank
BMP	Best Management Practice
BTU	British Thermal Unit
C-XX	Commercial Zoning districts
CAA	Clean Air Act
CCTMA	Clifton Corridor Transportation Association
CEQ	Council on Environmental Quality
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CDC	The Centers for Disease Control and Prevention
CE	Categorical Exclusion
CFC	Chlorofluorocarbons
CFR	Code of Federal Regulations
CGH	Center for Global Health
CH ₄	Methane
CHOA	Children's Healthcare of Atlanta
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CRA	Cultural Resources Assessment
CTP	Comprehensive Transportation Plan
CWA	Clean Water Act
dB	Decibels
DEIS	Draft Environmental Impact Statement
DHS	Department of Homeland Security
DOD	United States Department of Defense
DOE	United States Department of Energy
DRI	Developments of Regional Impact
EA	Environmental Assessment
ECUP	East Central Utility Plant
EIS	Environmental Impact Statement
EJ	Environmental Justice
EO	Executive Order
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
GALILEO	Georgia Library Learning Online
GCR	General Conformity Regulations

GAM	HHS General Administration Manual
GDNR-NCS	Georgia Department of Natural Resources – Nongame Conservation Section
GDOT	Georgia Department of Transportation
GA EPD	Georgia Environmental Protection Division
GNAHRGIS	Georgia’s Natural, Archaeological and Historic Resources Geographic
GRTA	Georgia Regional Transportation Association
GSF	Gross Square Feet
GPC	Georgia Power Company
GPD	Gallons Per Day
HHS	United States Department of Health and Human Services
HPD	Historic Preservation Division
HTHW	High Temperature Hot Water
ISC	CDC’s Interagency Security Council
kV	Kilovolts
kVA	Kilovolt Amperes
kW	Kilowatt
IPaC	Information, Planning, and Conservation System
L-XX	Light Industrial District
LBP	Lead-Based Paint
LCI	Livable Centers Initiative
LEED	Leadership in Energy and Environmental Design
LOS	Level of Service
LQG	Large Quantity Generator
LTH	Loudest Traffic Hour
LUST	Leaking Underground Storage Tank
M-XX	Industrial Zoning District
Master Plan	2015-2025 Facilities Master Plan
MBTA	The Migratory Bird Treaty Act
MGD	Millions Gallons per Day
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPH	Mixed-pine hardwood forest
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
MSAT	Mobile Source Air Toxics
Msl	Mean Sea Level
MSW	Municipal Solid Waste
MS4	Municipal Separate Storm Sewer System
MW	Megawatt
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NCHHSTP	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
NCID	National Center for Infectious Diseases
NDH	North Druid Hills
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance program
NHL	National Historic Landmark
NHPA	National Historic Preservation Act

NOI	Notice of Intent
N ₂ O ₂	Nitrous Oxide
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NPS	National Park Service
NSR	New Source Review
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
O ₃	Ozone
O-I	Office-Institution
OSHA	Occupational Safety and Health Administration
OW 1	Open Water 1
OW 2	Open Water 2
PHS	Public Health Service
PM	Particulate Matter
Psi	pounds per square inch
PSS	Palustrine Scrub-Shrub Wetland
PTE	Potential to Emit
R-XX	Single Family Residential Zoning Districts
RCRA	Resources Conservation and Recovery Act
RM-XX	Multifamily Residential Zoning Districts
ROD	Record of Decision
ROW	Right of Ways
RTP	Regional Transportation Plan
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
SOP	Standard Operating Procedure
SQG	Small Quantity Generator of hazardous waste
SSO	CDC's Security Services Office
SSPP	HHHS's Strategic Sustainability Performance Plan
SWPPP	Storm Water Pollution Prevention Plan
TNM	Traffic Noise Model
TOD	Transit Oriented Development
T-SPLOST	Transportation Special Purpose Local Option Sales Tax
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USDA NRCS	United States Department of Agriculture Natural Resources Conservation Service
USDHHS	United States Department of Health and Human Services
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank

VA	Veterans Affairs Medical Center
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
WCUP	West Central Utility Plant
WRC	Water Reclamation Center